Reverse Linkage

Development through South-South Cooperation



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Foreword

H.E. Dr. Bandar M. H. Hajjar, President, Islamic Development Bank

he Islamic Development Bank (IsDB) holds a unique position in promoting South-South Cooperation. This stems from its members, comprising countries from the Global South, and the fact that they are enriched by valuable knowledge and resources that they are willing to share among themselves. At IsDB, we have always set our priorities on partnerships with a focus on consensus, harmony and teamwork. We have also worked diligently to catalyse the exchange of know-how, expertise and resources across our member countries.

As we celebrate more than 40 years of development expertise, and look towards a more prosperous future for our member countries, we are well aware that the coming era will be beset by a new set of social, economic and environmental challenges. We are confident, however, that our resolve to overcome these challenges through effective partnerships will bring about sustainable socio-economic advances.

IsDB is transforming and repositioning itself to meet the needs of its stakeholders by becoming a **Bank of Developers** – a development institution that not only provides financing but also plays a key role in connecting and engaging key stakeholders and partners to transform the development journey of member countries. The Bank will encourage innovation towards new ways of funding and implementing projects, moving away from the traditional, centralised methods to a more engaging, crowd-based approach, utilising the effective involvement of stakeholders and partners.

With this spirit, IsDB has introduced an enhanced technical cooperation approach – Reverse Linkage – that identifies the existing know-how, expertise, technology and resources within our member countries and transfers them to those in need, with the objective of achieving sustainable development outcomes.

This publication explores our journey through the evolution of this enhanced technical cooperation mechanism and the kinds of tools and platforms that we have developed as part of its ecosystem. The publication is the result of collaborative efforts between IsDB and its partners who contributed extensively to its content. It sheds light on how we have, in recent years, worked on expanding partnerships



with regional development institutions, bilateral cooperation agencies, resource centres, and other partners in order to promote the Reverse Linkage concept.

The publication also provides examples of how Reverse Linkage projects are making a difference on the ground. Materials from partners have been included to show the pivotal nature of cooperation with IsDB, as well as to highlight their efforts to promote South-South Cooperation among their beneficiaries.

I firmly believe that this publication will be a significant addition to the body of knowledge on South-South Cooperation, and a source of inspiration for many. It will provoke opportunities to generate new ideas to solve development challenges through solidarity-based partnerships and crowd-based arrangements and, thus, unleash the full potential of South-South Cooperation.



H.E. Dr. Bandar M. H. Hajjar President, Islamic Development Bank

The Islamic Development Bank — long-standing experience in technical cooperation

IsDB Reverse Linkage Team¹

ver the last decades, developing countries have acquired considerable expertise and knowhow in a variety of fields. As a result, they are showing a growing interest in sharing experiences, and learning from each other to acquire rapid solutions to their challenges in order to accelerate the development process. Thus, Technical Cooperation among Developing Countries (TCDC) has surfaced as a new dimension of international cooperation for development, giving expression to the developing world's determination to achieve national and collective self-reliance.

The concept of South-South Cooperation (SSC) emerged in the second half of the last century, when many newly independent countries of the Global South united around shared political aspirations. This coalition was crowned in 1955 with the first large scale Asian-African conference held in Bandung, Indonesia – the Bandung Conference – where representatives from 29 nations adopted the Declaration on Promotion of World Peace and Cooperation.

The importance of SSC has subsequently been recognised in a series of declarations, resolutions, and decisions of the United Nations General Assembly, and the Organisation of Islamic Cooperation (OIC). Prominent among them are the Buenos Aires Plan of Action (BAPA) for promoting and implementing TCDC, adopted at the United Nations Conference held in Buenos Aires in 1978, and the Makkah Declaration of the Third Islamic Conference Summit in Makkah Al-Mukarramah and in Taif, Saudi Arabia, in 1981.

The BAPA initiative is considered to be a major cornerstone of SSC. It was signed by 138 states and was primarily intended to promote TCDC in recognition of the growing importance of South-South relations as well as the increasing demand for equitable and sovereign participation in international relations. The BAPA aimed to foster interest in technical cooperation, defined as an instrument capable of facilitating the exchange of successful experiences between countries that share close historical realities and face similar challenges.

The Makkah Declaration was prompted by profound concern and awareness of the tremendous potential of the technological, human and economic resources in the OIC and the urgent need for their exploitation through closer technical cooperation among member states. The Declaration called upon those states to initiate and strengthen collaboration in the field of technical cooperation to mutually foster increased utilisation of the talents, skills and technological capacities to accelerate socioeconomic development.

The Plan of Action for Economic Cooperation among Islamic Countries adopted by the summit in 1981 also emphasised the need for expanding bilateral and multilateral arrangements for promoting technical cooperation through the mechanisms of:

- Cooperative agreements
- Joint commissions
- Exchange of information on member countries' needs and capacities
- Wider use of member countries' experts, consultants and training facilities for the improvement of socio-economic well-being and progress.

Article-5 of the Makkah Declaration states: "Member States will endeavour to derive the utmost benefit from the expertise and technical capacities available to them, through exchange of experts, research scholarships for study, training and specialisation and the holding of various scientific and technical conferences and seminars."

Article-6 continues: "In order to meet their needs in the field of manpower and to derive advantage from the technical and administrative experience available, the Islamic States shall cooperate in the exchange of expertise in these fields and, other things being equal, give priority to manpower from member countries taking into account the bilateral and multilateral agreements already concluded and in conformity with national legislations in this respect."

To ensure determined pursuit and fulfilment of the requirements and laudable objectives of articles 5 and 6 of

The Makkah Declaration, in 1983 the Islamic Development Bank (IsDB) launched a dedicated Technical Cooperation Programme (TCP) among IsDB member countries.

IsDB Technical Cooperation Programme

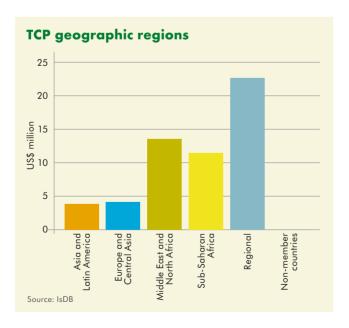
The TCP strives to achieve the following main objectives:

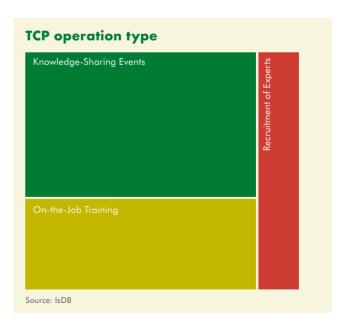
• Mobilise the technical capacity expertise and training capabilities of IsDB member countries for the purpose of fostering collaboration within those countries

- Promote opportunities for the exchange of experience, information and appropriate technologies suited to the development needs of member countries
- Alleviate the managerial, technical and institutional constraints that retard project implementation and efficiency
- Intensify the matching of needs identified in member countries with the capacities available in other member countries, and promote closer partnership among them.



Study visit to the International Centre for Diarrhoeal Disease Research, Bangladesh, (icddr,b) organized for the benefit of The Gambia, Maldives, Mozambique and Sierra Leone





The TCP is based on a tripartite approach involving beneficiary countries/institutions, provider countries/institutions, and IsDB as a facilitator/connector in addition to its role as financier. The modalities utilised for the promotion and accomplishment of the programme objectives are essentially:

- Recruitment of experts
- Provision of on-the-job training
- Organization of knowledge-sharing events such as workshops and seminars.

Achievements

From 1983 until the end of 2017, IsDB approved, under its TCP, a total number of 2,309 operations amounting to US\$55.54 million. These include 928 on-the-job training sessions amounting to US\$18.37 million, 974 knowledge-sharing events amounting to US\$28.76 million, and the recruitment of 407 experts amounting to US\$8.41 million. The TCP has thus ensured the training of more than 15,000 people, provided the opportunity for more than 20,000 specialists to share their knowledge and experiences in numerous forums, and dispatched 500 experts among member countries. Moreover, these operations have helped to promote cross-country connectivity among institutions and individuals, to bridge cultures and to improve the appreciation of knowledge in addressing developmental solutions.

The operations covered a large number of sectors and subsectors in line with the needs of member countries and the priorities of IsDB. The social sector (health and education) accounted for the largest share at US\$12.74 million (23 per cent), followed by the finance sector at US\$11.75 million (21 per cent), public administration at US\$6.66 million (12 per cent) and agriculture at US\$6.3 million (11 per cent).

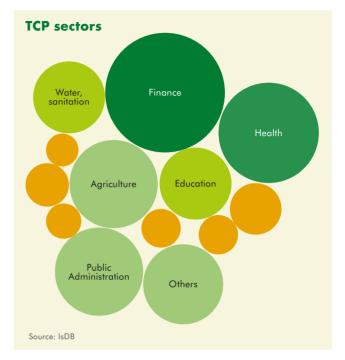
An example of TCP operations across the various sectors is the support provided to the National Laboratory of Public Health, Burkina Faso. This institution is the country's central reference laboratory for a wide range of analysis and expertise related to medical biology, pharmaceutical products, nutrition, the environment, and other fields linked to health security. It has a mandated responsibility for the country's epidemiological supervision as well as for the continuous quality control of food, water, medicine, pesticides and other consumable products.

The mandate requires satisfactory methods of analysis, relevant organizational management, and competent, well trained staff. Therefore, to ensure its efficiency, the local authorities conducted various exercises for the assessment of the laboratory's needs, resulting in the establishment of a laboratory capacity building programme. IsDB, through the TCP, recruited a team of three Tunisian experts to build its capacities, over a one-month period, in the field of food



Regional training course for engineers from member countries of the Trans-Saharan Road Liaison Committee





microbiology, food toxicology and physico-chemistry. An expert pharmacist was then recruited for a duration of six months to improve the technical and scientific capacity of the laboratory in medicine and drug quality control. A specialist in fertiliser control was also subsequently provided.

These TCP interventions enabled the laboratory, among other improvements, to update its methods of quality control, set up procedures in conformity with international standards, and move on achieving international accreditation.

In the same way as Burkina Faso, all member countries from the various regions benefited from the activities offered under TCP, with Saudi Arabia being the largest beneficiary among member countries. Since inception, TCP financing to Saudi Arabia has reached US\$2.12 million. The second largest beneficiary is Turkey, with total approvals of US\$1.59 million. Egypt, Morocco and Mauritania are the third, fourth and fifth largest beneficiary countries with total approvals of US\$1.40 million, US\$1.28 million, and US\$1.23 million, respectively.

The TCP, which is demand driven, provided grants for short-term interventions addressing instant capacity development needs of member countries by making use of a fast track processing cycle. It provided quick and simple implementation as well as disbursement modality that helped to ensure timely availability of funds to beneficiaries. It enabled IsDB to strengthen existing, and forge new, partnerships with centres of excellence such as the Alexandria Regional Centre For Women's Health and Development and

Bank Negara Malaysia as well as Technical Cooperation Agencies in member countries.

Over the years, the TCP has shifted from an input- to a result-focused approach. In order to strike a balance between member countries' growing needs for capacity development and improving the overall TCP structure, IsDB began to place more emphasis on results rather than inputs, while being involved in facilitation and closer follow-up instead of operating solely as a financier. The Bank also learned, among other things, that technical cooperation activities should focus not only on the human resource dimension of capacity development but also on an assessment of the institutional and enabling environments.

With its long-standing experience in technical cooperation, and based on the lessons learned, IsDB has enriched the field of technical cooperation with a scaled-up, results-oriented and capacity development modality known as Reverse Linkage. This new modality is defined as a technical cooperation mechanism enabled by IsDB whereby member countries and Muslim communities in non-member countries exchange their knowledge, expertise, technology and resources to develop their capacities and devise solutions for their autonomous development.

Through Reverse Linkage, the Islamic Development Bank has become a leader in technical cooperation, and is facilitating a more holistic, win-win SSC engagement that also fits within the agenda of 2030 and, more particularly, with Sustainable Development Goal 17 that demands the revitalisation of global partnerships.

Sustainable development results through enhanced partnerships — IsDB's Reverse Linkage mechanism

IsDB Reverse Linkage Team¹

It has nearly been 40 years since the adoption of the Buenos Aires Plan of Action, which put South-South Cooperation (SSC) in the spotlight of socio-economic development. As a complementary approach to providing vital expertise and resources to countries in need, SSC opened up a new path to economic development: one that puts solutions to economic challenges first, before funding. By identifying cooperation among countries as a way to solve barriers to development, SSC has shown that non-conditional and solidarity-based approaches can also make a significant contribution to economic development.

As an institution that derives its operating principles from the rich traditions and heritage of its member countries, the Islamic Development Bank (IsDB) considers SSC as the natural approach to helping its member countries advance on the scale of economic development. It is for this reason that IsDB – from its inception over four decades ago – has identified promoting SSC as one of its primary goals.

IsDB, along with all other development institutions, is entering into a new era underpinned by the adoption of the Sustainable Development Goals (SDGs). The SDGs, developed after much consultation, will require joint efforts in order to fulfil the persistent challenges of our member countries on the ground – related to poverty, access to health and education, food security, climate resilience, security and a host of other challenges.

In achieving the SDGs effectively, the forming of strategic partnerships will play a substantial role. In this respect, SSC, in addition to traditional North-South development approaches, will become ever more important as many of the countries of the Global South are in a better position to share their experiences, expertise, and resources with other countries.

The formulation of the Reverse Linkage modality

As a multilateral development institution that consists only of member countries from the Global South, IsDB continues to dedicate resources as a key player in promoting SSC, especially as it embarks on a new journey to become a "Bank

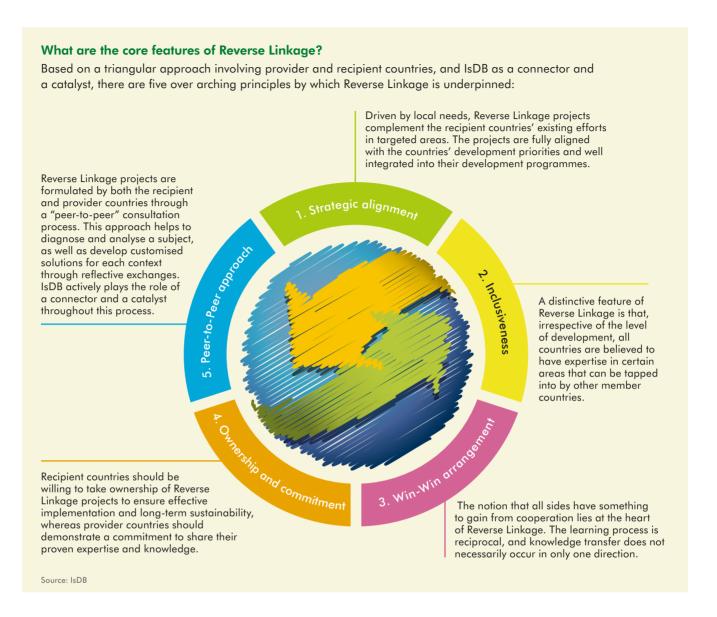
of Developers" which would allow IsDB to play the role of an enabler in the exchange of innovative sustainable development solutions among member countries. Since 1983, IsDB has been implementing The Technical Cooperation Programme, linking member countries through shortterm technical cooperation activities with the overall aim to transfer capacity from one country to another.

Among the many lessons learned from the long experience of implementing technical cooperation operations, the most notable can be outlined as follows:

- Member countries possess a wealth of knowledge and expertise that can be tapped to strengthen economic development
- Long-term engagements among member countries can produce more sustainable results as well as enduring partnerships.

The search within IsDB for a more enhanced SSC mechanism coincided with the development of the Member Country Partnership Strategy (MCPS) of Turkey in 2010, during which the government signalled its enthusiasm to share the country's knowledge, expertise, technology and resources with other developing countries. In addition, IsDB has been well aware of the successes many of the other member countries have registered with regard to their economic development. These successes culminated in the accumulation of significant capacity in many areas that, if tapped into properly, could be transferred to help other member countries that lag behind.

These circumstances eventually lead to the formulation of the Reverse Linkage (RL) mechanism – defined as a technical cooperation mechanism enabled by IsDB whereby member countries and Muslim communities in non-member countries, exchange their knowledge, expertise, technology and resources to develop their capacities and devise solutions for their autonomous development. As an enhanced approach to technical cooperation, the RL mechanism has been piloted since 2012, during which time many standalone projects responding to the capacity development needs of member countries were



formulated, and have either been completed, or are currently being implemented. From the lessons learned from the pilot phase, IsDB formulated its RL policy that strengthens connectivity among member countries. The Bank is currently moving to mainstream RL into its ordinary projects as a contemporary tool of development that promotes SSC.

With RL, many partnerships have been built with member country institutions, including resource centres (institutions with expertise in specific fields that are positioned to share their expertise and technology in structured development interventions), as well as various bilateral cooperation agencies of Azerbaijan (Azerbaijan International Development Agency – AIDA), Egypt (Egyptian Agency of Partnership for Development – EAPD), Morocco (Moroccan Agency for International Cooperation – AMCI), Indonesia (Ministry of National Development Planning – BAPPENAS), Tunisia

(Tunisian Agency for Technical Cooperation – ATCT), and Turkey (Turkish Cooperation and Coordination Agency – TİKA), among others. Partnerships with the private sector as well as the third sector have also been established.

In the last five years, IsDB and its partners supported 15 RL projects amounting to US\$125 million, with the aim of achieving sustainable development results. For instance, a US\$30 million rural electrification project in Niger, with the help of the National Electricity and Water Company (ONEE), in Morocco, is expected to increase electricity access in the remote rural areas by 20 per cent by 2021 through connecting 17,500 households with a targeted population of 122,500 and providing 1,500 connections to public facilities (schools and hospital) as well as small businesses.

A total of 17 provider and recipient member countries have participated in these projects so far and the list is



Indonesian experts during a field visit to the Kyrgyz Republic for the Reverse Linkage project on the artificial insemination of livestock

continuously expanding as demand increases. RL projects have covered a wide range of focus areas including, but not limited to, health, education, agriculture and food security, renewable energy, and disaster risk management. Examples include the following:

- Reverse Linkage between Niger and Turkey on fighting avoidable blindness
- Reverse Linkage between the Kyrgyz Republic and Indonesia on artificial insemination of livestock
- Reverse Linkage between Suriname and Malaysia on improving rice production
- Reverse Linkage between Chad and Tunisia on bilingual education
- Reverse Linkage between Mali and Morocco on solar energy for rural development.

Features of Reverse Linkage

It is worth briefly discussing the main elements of what constitutes an RL project, and how the mechanism differs from other types of technical cooperation modalities, and from ordinary projects.

One of the most important features of RL is that, as an enhanced technical cooperation mechanism, its primary purpose is to bring together at least two countries to help one another solve their development challenges through a long-term engagement. This engagement targets specific development results, rather than remaining at the activity level.

The second prominent feature of RL is that the development solution at the core of a project is designed through a peer-to-peer approach. This means that both the recipient and provider countries are fully engaged in the needs assessment, design, and implementation phases of the project. In this way, the approach enables the formulation of the best-fit solution, rather than imposes a fit-for-all solution from the top down. During the peer-to-peer approach, IsDB plays

the role of an enabler, catalysing the process of exchanging know-how, expertise, technology and resources between member countries.

The peer-to-peer approach used in project development leads to a level of ownership on the side of the provider as well as the recipient countries. The bottom-up approach involving all stakeholders ensures that they all have a say in how the solution is crafted, ensuring sustainability in the long-run.

The ownership element is further strengthened when all partners, including the recipient and the provider, contribute financially to the project, in addition to participating in the exchange through the sharing of know-how and expertise. IsDB provides only a portion of the funding needed.

These core features create an environment where all sides win – the recipient acquires new knowledge and expertise that it can plug into its socio-economic development process; the provider enhances its position through international exposure, enhances its network of developers and partners, and opens up new markets of opportunity; and IsDB and its development partners are able to achieve their overall goal of supporting the development of member countries through an innovative, and less-costly partnership model.

The way forward for Reverse Linkage

While expanding RL, IsDB looks for new partnerships, especially with the private sector, and the non-governmental sector, which have not been tapped into as extensively as the public sector. This will bring new challenges, such as ensuring a balance between development goals and private sector goals, maintaining high quality-at-entry, uncovering new forms of funding through donors that have not been tapped yet, and last but not least, ensuring that all projects target the SDGs.

As the IsDB repositions itself within the community of development institutions by adapting to changing circumstances both internally and externally, taking advantage of its vast network of member countries (along with all the institutions that exists in them) will be critically important. This is already well articulated in IsDB's 10-Year Strategic Framework and the President's 5-Year Programme (P5P), which envisions IsDB to become a "Bank for Developers". RL provides a prototype mechanism that enables IsDB to play the role of an enabler by using its knowledge of the member countries to identify needs as well as potential providers of development solutions, and establishing and sustaining links such that transformative and sustainable change in economic development can be achieved.

The connections that we help build among the member countries will surely serve us right in achieving not only SDG 17, but also make a positive contribution to achieving all the other SDGs.

Providing development solutions by mapping resource centres in IsDB member countries

IsDB Reverse Linkage Team¹

Development Bank (IsDB) has been to foster the human and economic development of its member countries through various approaches, mechanisms and modalities, including financing economic development projects and promoting cooperation among the member countries themselves.

In this regard, the IsDB 10-Year Strategic Framework, adopted in 2015, has recognised the need for enhancing the role of the Bank as a partner of choice in the development of its member countries, and as a facilitator of cooperation between member countries, and Muslim communities in non-member countries.

More recently, in 2016, IsDB initiated the President's 5-Year Programme (P5P) which advocates, among others, the strengthening of IsDB's role as a connector. The P5P aims at transforming IsDB into a bank of development, developers and knowledge, by giving more prominence to channelling comprehensive and innovative development solutions from one member country to another.

In this spirit, collecting, validating and sharing information about providers of development solutions from within the member countries – referred to by IsDB as resource



RC mapping completes IsDB's cycle for matching the demand and supply of technology and expertise across its member countries

centres (RCs) – is of paramount importance. RCs are institutions that have accumulated knowledge and expertise and have developed reliable as well as adaptable solutions and technologies that can be shared with other countries. These centres can belong to the public, private or nongovernmental spheres. They work in one or more of IsDB's priority sectors such as, but not limited to, health, agriculture, energy, education, transportation, and information and communication technologies.

The challenge of determining solution providers

IsDB, through its network and partnerships, has cooperated with many RCs in member countries and benefitted from the wealth of valuable knowledge and deep expertise that they have in their respective sectors. The features of these centres vary from one country to another in terms of size, number of years of experience, range of activities, international collaboration, and exposure.

This diversity constitutes an advantage but has some challenges in terms of classification. Until IsDB introduced a mapping methodology, there was not a standardised and sustained process for identifying the RCs. A comprehensive repository of their profiles did not exist, so the knowledge and expertise of the majority of RCs were not recorded and accessible, and were therefore under-utilised, particularly outside their home countries.

In addition, the geo-mapping initiatives – online mapping platforms – of the development organizations usually focused on sharing project-related data that did not necessarily contain in-depth data on development institutions such as RCs.

The response of the Islamic Development Bank

Within the framework of its Reverse Linkage mechanism, the Bank recognised the value of identifying RCs in order to match seekers and providers of knowledge across member countries through a robust process that is backed-up by reliable data. Therefore, IsDB launched an integrated programme for RC mapping along with a methodology to select the RCs in a consistent manner.

IsDB, with the Statistical Economic and Social Research and Training Centre, Islamic Countries (SESRIC) have jointly developed this mapping methodology. It consists of the following steps: choosing the areas of the country's comparative advantage; identifying a long list of candidate RCs through desk research and contact with relevant authorities in the country; collecting specific data from the RCs through a comprehensive questionnaire; assessing the collected data based on a specific scoring scheme and shortlisting the top performers; preparing concise profiles of shortlisted RCs; and finally publishing the RCs' profiles. Each profile includes information on areas of intervention and sector, human resources, principal activities, areas of

The mapping of resource centres in Indonesia, Pakistan and Turkey

The first Resource Centre (RC) mapping exercise was launched in Turkey in partnership with the Statistical Economic and Social Research and Training Centre, Islamic Countries (SESRIC), the Turkish Cooperation and Coordination Agency (TİKA) and the United Nations Office of South-South Cooperation (UNOSSC). It covered the sectors of agriculture, livestock and food security; health and nutrition; technical and vocational education and training; transport and communications; and disaster and emergency management. In total, 27 Turkish RCs were selected.

In Indonesia, IsDB and the Ministry of National Development Planning of Indonesia (BAPPENAS) produced a report on mapping Indonesia's RCs. It presented the profiles of 22 RCs in the sectors of agriculture; marine and fisheries; health and population; pharmaceuticals; technical and vocational education and training; planning and budgeting; microfinance; transportation; industry; trade; and disaster risk reduction and mitigation.

In Pakistan, IsDB and the Higher Education Commission, Pakistan collaborated in preparing a report on mapping Pakistan's RCs. The report presented the profiles of 16 institutions in the sectors of agriculture; agro-based industries; pharmaceuticals; and information and communication technologies.







expertise, achievements and international cooperation; along with the contact information.

The mapping methodology is applied hand-in-hand with each member country in order to ensure ownership and utilise the local country knowledge. IsDB oversees only the process that is carried out by a national institution identified in collaboration with the relevant government authority. Furthermore, in order to undertake a robust final selection of RCs, assessment and scoring is carried out by an independent institution.

All collected information on the RCs is published in a country-based specific report and made available on a geo-mapping system. This system takes advantage of the efficiency and flexibility provided by geographical information systems in combining and presenting spatial and textual information. The system's key features include displaying the locations of RCs; filtering the RCs by region, country or sector; displaying either the basic information or a complete profile of an RC; adding feedback on an RC; and proposing the addition of new RCs.

Sustaining the achievements

So far, IsDB has mapped more than 100 RCs in Indonesia, Pakistan, Turkey and other member countries. The Bank has also initiated the mapping of RCs in Malaysia, Morocco and Tunisia. By analysing the profiles of the mapped RCs, it is highly important to understand that they operate under very different circumstances. Common success factors of RCs are their commitment and dedication to their fields of work and aspiration to make meaningful contributions to their respective communities in addition to nurturing talent.

Information acquired about the services and products of the RCs facilitates their integration into new projects. More importantly, engaging a relevant RC in project implementation ensures that the beneficiary country will acquire advanced knowledge and the latest technologies.

It is worth noting that the mapping programme has already yielded early results, as some of the identified RCs are now involved in the design or implementation of technical cooperation projects outside their home countries.

In order to maintain the quality of services provided by the RCs, IsDB will keep the data on RCs up to date and make sure that deserving institutions continue to be mapped. This will be done through a three-step approach that includes:

- Continuously updating the information on mapped RCs through appropriate means
- Revising thematic areas every five years for each mapped country in the light of economic indicators as well as an assessment of whether the previously selected RCs continue to represent the strongest areas of comparative advantage

Re-assessing previously mapped RCs in order to validate their continued qualification for inclusion in IsDB's mapped RC database.

Building the complete information repository of South-South Cooperation

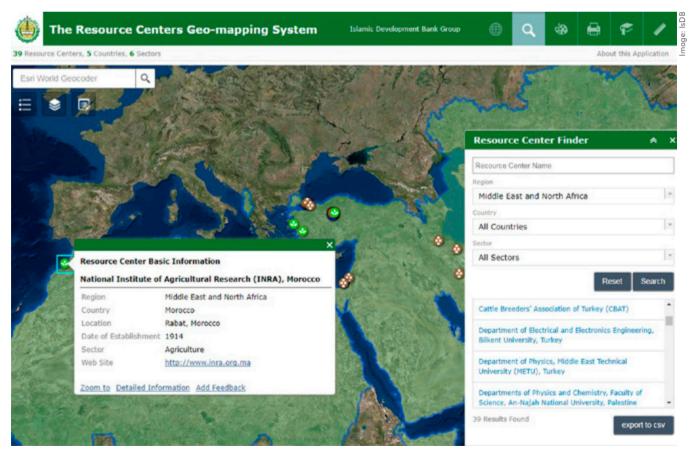
With the belief, irrespective of the level of development, that all 57 IsDB member countries have expertise in certain areas that can be tapped into by other member countries, IsDB's goal is to complete these mappings in all member countries. The mapping of RCs will be expanded in the future – horizontally within each country and vertically by sectors and themes across regions – to become a full information repository of South-South Cooperation (SSC).

The member countries can use IsDB methodology to map their RCs and share it through IsDB's geo-mapping platform. The platform can also capture other information such as requests made to a specific RC for assistance, joint projects, SSC actors, and SSC mechanisms.

The mapping of those data objects, in both textual and geospatial format will create and enrich global information bases that can both boost SSC and contribute to Sustainable Development Goal 17.

Process for mapping resource centres

- Identify the themes to be mapped
- Identify the authority for each theme
- Meet the head of the authority and describe the purpose of the mapping exercise
- Set up an expert level meeting and identify a long list of institutions
- Visit the resource centres (RCs)
- Collect and consolidate the information from RCs
- Assess the data and shortlist the RCs to be mapped
- Send the shortlist to the IsDB Governor's office for endorsement
- Prepare the final report on RCs with their profiles
- Validate the profiles with the RCs
- Publish the profiles and integrate with the online geo-mapping platform
- Organize launching event for the published profiles.



The mapping of IsDB member countries' resource centres provides a rich repository of data in both textual and geospatial format

3 2-C Initiative for Effective Technical Cooperation

IsDB Reverse Linkage Team¹

In the last two decades, many of the developing countries have accumulated substantial development experience and acquired expertise, knowledge and technology, enabling the vast potential of these advances to be shared with other countries in the Global South. Owing to this accumulated knowledge, coupled with increased prosperity in the developing countries, the volume of South-South Cooperation has increased to such unprecedented levels that it has finally come under the spotlight that it deserves.

In this context, partnerships between the Islamic Development Bank (IsDB) and member countries' Technical Cooperation Agencies (TCAs) were developed. They were operationalised through the joint implementation of technical cooperation activities and later on through Reverse Linkage projects. Thus, new partnerships were forged with member countries' TCAs, including:

- Azerbaijan International Development Agency (AIDA)
- Egyptian Agency of Partnership for Development (EAPD)
- Ministry of National Development Planning of Indonesia (BAPPENAS)
- Moroccan Agency for International Cooperation (AMCI)
- Tunisian Agency for Technical Cooperation (ATCT)
- Turkish Cooperation and Coordination Agency (TİKA).

To capitalise on these partnerships, in May 2016, a round-table of TCAs from member countries was organized by IsDB at its 41st Annual Meeting in Jakarta in order to strengthen partnerships, enhance complementary relationships and achieve more visible and sustainable results on the ground.

In line with the roundtable theme – Scaling Up and Enhancing Partnerships among IsDB Member Countries for Tangible Results – and while recognizing the comparative advantages as well as the wealth of knowledge and expertise of IsDB member countries, the TCAs reached the conclusion that coming together is the best way to achieve noticeable results on the ground. They particularly acknowledged that coordination, collaboration and cooperation among provider and recipient member countries are fundamental to improving results and impacts in line with the Sustainable Development Goals (SDGs).

Thus, they recommended strengthening their partnership through a new framework of action: the 3 2-C Initiative for Effective Technical Cooperation, structured around three pillars:

- Pillar 1: Convergence and Complementarity
- Pillar 2: Coordination and Collaboration
- Pillar 3: Capitalisation on Knowledge and Communication.

To translate theses pillars into actions, the TCAs agreed to develop a roadmap for enhancing technical cooperation for sustainable development among IsDB member countries and to convene an annual dialogue meeting for the member countries' TCAs to follow-up.

Building on that momentum, the first dialogue meeting was held in December 2016 at IsDB headquarters in Jeddah. It resulted in setting up a platform of collaboration with a coordination mechanism to be gradually expanded in the future. A second dialogue meeting was held in Tunisia in December 2017 to strengthen this partnership within the framework of the 3 2-C Initiative for Effective Technical Cooperation and to collectively implement the 2017–2020 roadmap structured around the 3 2-C pillars.

From the Jakarta roundtable to the Tunisia meeting, the number of TCAs and partners increased to include:

- Azerbaijan International Development Agency
- Comorian International Cooperation Agency
- Egyptian Agency of Partnership for Development
- Guinean Agency for Technical Cooperation
- Ministry of National Development Planning of Indonesia
- Malaysia External Trade Development Corporation
- Moroccan Agency for International Cooperation
- · Nigeria Directorate of Technical Aid Corps
- Palestinian International Cooperation Agency
- Senegal Technical Cooperation Department
- Statistical, Economic and Social Research and Training Center for Islamic Countries
- Tunisian Agency for Technical Cooperation
- Turkish Cooperation and Coordination Agency.

This dialogue opened avenues of collaboration with other countries of the Global South such as Brazil and Argentina.

Three objectives to achieve development and solidarity

The objectives of the 3 2-C Initiative for Effective Technical Cooperation are:

- Setting up a mechanism of coordination towards achieving sustainable development on the ground
- Strengthening existing partnerships among member countries' TCAs and with IsDB, and deepening their relations for mutual benefits
- Contributing towards shaping and influencing the global agenda of technical cooperation, as well as South-South and Triangular Cooperation.

The three pillars of success

Derived from the meetings in Jakarta and Jeddah, the Roadmap 2017–2020 of the 3 2-C Initiative for Effective Technical Cooperation is structured around three pillars:

Pillar 1: Convergence and Complementarity (high level/upstream)

Meaning: Convergence on strategic agenda and complementarity based on comparative advantage.

Purpose: Setting up strategic partnerships and synergy among TCAs, as well as with IsDB, and increasing the strategic positioning and engagement of the TCAs for shaping the international agenda and architecture of technical cooperation and South-South and Triangular Cooperation.

Implications: Moving together at the international level and building on each other's strength to ensure that the resources are most efficiently used in pursuit of the joint objectives and results. This will imply harmonising positions at the international level, adopting joint approaches, developing common understanding and vision and conducting joint planning and programming.

Examples:

- Strengthening the capacity of the member countries' governments and national stakeholders to engage in effective technical cooperation and the South-South and Triangular Cooperation
- Conducting joint efforts to develop the capacity of existing and/or newly established agencies
- Developing tools and approaches for fundraising, leveraging and co-financing.

Pillar 2: Coordination and Collaboration (field level/downstream)

Meaning: Coordination of field operations and collaboration by sharing knowledge and resources.

Purpose: Promoting the implementation of joint operations (programmes and projects) whenever feasible and mutually agreeable among TCAs and with IsDB, toward achieving specific goals and enhancing the efficiency of technical cooperation efforts.

Implications: Working together in the field and devoting joint resources (workforce and financial) for selected areas with the aim of maximising the benefits and the impact (tangible benefits/outcome).

Examples:

- Carrying out multi-sector interventions in one country through the implementation of joint integrated operations (multi-sector operations in specific geographical areas)
- Carrying out cross-country interventions through the implementation of joint operations in a specific sector for multiple countries (cross-country or regional operations)
- Reinforcing results-oriented approaches among the TCAs, including the establishment of specific procedures for designing, monitoring and evaluating joint operations and harmonising operational practices and standards.

Pillar 3: Capitalisation on Knowledge and Communication

Meaning: Capitalising on acquired knowledge to improve the work and communicating successful initiatives and projects for branding and visibility purposes.

Purpose: Promoting learning from technical cooperation experiences; the development of partnership initiatives; peer-to-peer learning and knowledge exchange in specific sectors or subsectors.

Implications: Capturing and sharing the knowledge and know-how gained by working together to the purpose of ensuring sustainability, increasing visibility and creating long-term and permanent competitive advantage.

Examples:

- Systematising knowledge-capturing through success stories and other means, and publishing them at the national, regional and global level
- Producing periodic reports on technical cooperation and South-South and Triangular Cooperation initiatives, supported by specific indicators highlighting IsDB member countries' efforts
- Carrying out joint needs and supply assessments in specific sectors or subsectors



Second dialogue meeting under the 3 2-C Initiative, Tunisia

Creating an online portal to share success stories, periodical reports and publications among IsDB member countries' TCAs.

Guiding principles and strategic orientations

The design and implementation of the roadmap 2017–2020 are guided by the internationally recognised South-South and Triangular Cooperation principles, which include:

- · Respect of national sovereignty
- · National ownership and independence
- Equality
- Non-conditionality
- · Non-interference in domestic affairs
- · Mutual benefit.

In addition, the activities undertaken under the roadmap should necessarily fit with the following strategic orientations:

- Focusing on the new policy frameworks for member countries to foster cooperation among TCAs, in line with the 2025 Programme of Action, especially Item 9, of the Organization of Islamic Cooperation (OIC); and the SDGs, especially SDG 17 that emphasizes the importance of South-South and Triangular Cooperation
- Building on successful initiatives, such as the SESRIC Capacity Building Programmes and the IsDB Reverse Linkage Mechanism for Technical Cooperation

- Identifying priority sectors and countries where coordinated interventions can be applied and become successful
- Replicating and up-scaling proven developmental solutions and best practices and promoting cross-country interventions to increase the impact of technical cooperation and South-South Cooperation partnerships
- Using the results-based approach for formulating and designing strategic plans of joint intervention, and continually monitoring progress
- Enhancing dialogue and cooperation at global level for better positioning and visibility.

Conclusion

In line with IsDB's 10-Year Strategic Framework and the President's 5-Year Programme, enhancing partnerships and facilitating the share of knowledge and expertise between IsDB member countries are among the top priorities of the Bank in the coming years. In this regard, while strengthening partnerships with existing TCAs in member countries, IsDB is on the lookout to help other member countries to set up their own technical cooperation agencies and to facilitate the sharing of knowledge and expertise with their counterparts.

These extensive efforts in enhancing partnerships and facilitating the sharing of knowledge and expertise will help in building national and regional ecosystems for enhancing South-South Cooperation, which has emerged as a complementary mechanism to North-South Cooperation.

Driving the 2030 Agenda through South-South Cooperation

Dr. Rami M.S. Ahmad, Special Envoy on SDGs, Senior Advisor to the President, Islamic Development Bank

ccording to the memorable African adage: If you want to go fast, go alone; if you want to go far, go together. The wisdom of this recurs in many historical writings that tell of how challenges and difficulties are overcome when people work together as a team, each taking a portion of the responsibilities. The recent history of economic and social development has shown repeated attempts to move this wisdom from a local to a global level through various regional and thematic initiatives, arriving at the Millennium Development Goals (MDGs) and, most recently, to the 2030 Agenda and the Sustainable Development Goals (SDGs).

The 2030 Agenda is the culmination of international wisdom and experience in recognising that a comprehensive and inclusive strategy, that will leave no one behind, cannot be realised without the true spirit and effective actions of partnerships.

These recent initiatives accompanied by the new challenges have created a paradigm shift in development thinking. Development is no longer considered purely in terms of giving financial aid to developing countries, or of challenges that exist entirely in the developing world. Statistics show that the majority of the world's poor live in countries defined as middle-income. Moreover, the entire world cannot properly handle the challenge of rising climate change unless the other late industrialisers agree to cooperate with the rest of the world in tackling these critical environmental issues. Even the developed countries are facing an unprecedented increase in rates of inequality. For example, the average income for the top 10 per cent of earners in the US is more than nine times as much as the lowest 90 per cent. The social and political implications of this cannot be ignored.

The development project business model has changed its focus from better management – a top-down model – to a more participatory approach. Partnership, as a major driver for development and growth, is no longer seen as the giving of resources by multilateral institutions or developed countries to developing countries, but as an instrument that facilitates cooperation, not only between countries, but also between major stakeholders within each country and among countries.

Regardless of the progress achieved with the MDGs, substantial challenges remained which led to a shift in policy and a re-evaluation of the development agenda in order to construct a new set of goals. In 2015, the international development community and the governments of 193 countries agreed to a new programme - the 2030 Agenda - for comprehensive and sustainable human development. It aspires to achieving 17 high level goals and 169 specific targets, encompassing the social, economic and environment dimensions of development. The difference in the SDGs lies not only in the comprehensiveness of the goals that encompass all dimensions of development, but also in the innovative framework for the implementation of the goals, with a marked emphasis on multi-stakeholder partnerships as one of the main routes to successful implementation. This is articulated in SDG 17 which is set up to strengthen the means of implementation and revitalise the global partnership for sustainable **development**. It is instructive that SDG 17 came about as a major driver for achieving the SDGs following the conclusion of numerous engagements and brainstorming sessions (over 7 million consultations over a period of almost 3 years) among all stakeholders including governments, the private sector, civil society and, most importantly, representatives of the beneficiaries themselves.

It is important to understand the context for the special emphasis on partnerships. It is estimated that achieving the SDGs will require US\$2–3 trillion annually until 2030, from an international GDP of approximately US\$115 trillion. However, the amount of Official Development Assistance is only around US\$143 billion annually, and all financing by multilateral development banks is about US\$127 billion annually. Regardless of the accuracy and variations in the estimates, there is clearly a huge financing gap to be resolved if the development community is serious about achieving the SDGs. Many creative initiatives will need to arise, and smarter, more substantial partnerships must be forged in order to reduce the gap.

One way of reducing the funding gap and initiating partnerships for development is to tap into the paradigm of South-South Cooperation (SSC) as a platform for the exchange of resources, technology, and knowledge among



Meeting between Ms. Amina Mohamed, UN Deputy Secretary-General; Dr. Bandar Hajjar, President, IsDB; Dr. Rami Ahmad, Special Envoy on SDGs; and IsDB Group staff to enhance awareness of, and promote alignment with, the SDGs



Forum on Harnessing Knowledge and Experience for the SDGs, organized by the SDG Community of Practice during the 2017 IsDB annual meeting, Jeddah

the countries of the Global South. In fact, SSC is already part and parcel of the SDGs with nine out of the 19 targets under SDG 17 relating directly to SSC.

The IsDB Group is fully committed to helping its member countries (MCs) to achieve the SDGs. The motivation comes not only from the Bank's dedication to solving MCs' challenges, but is also from the convictions and beliefs embodied within the principles and objectives of the Islamic Sharia'a. This is evident in IsDB's new 10-Year Strategic Framework, and the President's 5-Year Programme (P5P), with one of its major thrusts being Linkage by Partnerships. With this new vision, IsDB will transform itself into a network of developers that can fill financing gaps and utilise cutting-edge, innovative solutions and products in the interest of the MCs.

The Bank's commitment to the SDGs is also being promoted inside the organization in which the "4As" – Awareness, Alignment, Advocacy and Adaptation – are being realised. Professional networks and platforms are being created to share experiences and expertise among staff, both horizontally and vertically, in order to ensure that best practices in achieving the SDGs are quickly and efficiently disseminated across the IsDB Group. An SDG

Community of Practice (CoP) was launched within the Group in mid-2017 to spread awareness and develop core expertise, generate knowledge and develop innovative solutions to help MCs achieve the SDGs.

IsDB is, by definition, an SSC organization since it is the only multilateral development bank whose members are from the Global South, and with all of its capital coming from those countries. Therefore, even before the formulation of the SDGs and the emphasis on partnerships as highlighted by SDG 17, IsDB has been working hard to promote cooperation and solidarity-based partnerships among its MCs. Various programmes and initiatives have been implemented over the years, which have endeavoured to benefit from the vast network of 57 MCs and their expertise in various fields. The primary way of promoting partnerships used to rely on the mechanism of technical cooperation through the transfer of knowledge, expertise, and resources from one member country to another.

As IsDB navigates the paradigm shift necessitated by the SDGs, and transforms itself into "A Bank of Development and Developers", it is also taking a hard look at its behaviour across the board, including the methods of mobilising resources, implementing projects, and promoting partnerships. This is also happening in the promotion of technical cooperation, through which a new modality has been piloted. Known as Reverse Linkage, it is a long-term, results-oriented, technical cooperation mechanism with the aim of developing capacity in the MCs. This enhanced mechanism has proved to be useful in achieving development results on the ground. The current question is of how to scale-up and ensure the sustainability of the impact.

The transformation from a centralised to a decentralised structure, has come at an opportune time for IsDB. With regional hubs spread out across MCs, the plan is to turn Reverse Linkage into a universal project implementation modality, with the main purpose of developing much needed capacity within the MCs. This approach will help to further strengthen the solidarity among MCs, creating new opportunities for trade and investment and all aspects of socio-economic development. The flexibility of Reverse Linkage will not only help in achieving SDG 17, but also help IsDB support the MCs' achievement of all SDGs, beginning with helping countries to exchange experiences in aligning National Development Plans with the SDGs. An example being considered is that of helping Sudan to benefit from Indonesia's rich experience in localisation and planning for SDG implementation.

If you want to go fast, go alone; if you want to go far, go together. The challenge remains as to how we go, both fast and far, together.

United Nations Office for South-South Cooperation in partnership with IsDB

Jorge Chediek, Envoy of the Secretary-General on South-South Cooperation and Director, United Nations Office for South-South Cooperation

he world aspires to – and has envisioned – a future free of poverty which is to be gained through the achievement of internationally agreed goals, including, most recently, the Sustainable Development Goals (SDGs). The 2030 Agenda, which guides global development efforts, stresses the importance of South-South cooperation (SSC) in achieving sustainable development. Goal 17, in particular, places emphasis on SSC and Triangular Cooperation in achieving these ambitious development objectives. SSC, as a complement to traditional development assistance, wherever needed, offers enormous opportunities and potential to support accelerating progress towards achieving the Goals.

In recent years, the scope of SSC has expanded well beyond technical cooperation and knowledge exchanges to include trade, investment, infrastructure and other fields of connectivity as well as the coordination of development policies and strategies among developing countries. SSC has also become more visible in regional and global development discourse and initiatives. New SSC initiatives are increasingly facilitating regional, subregional and interregional integration.

Over recent years, the countries of the Global South have generated about half of the world's GDP and contributed greatly to economic growth. An increasing momentum is being supported by the strengthened institutionalisation of collaborative efforts. The development of formal rules, informal norms, and dedicated organizations has moved SSC increasingly into the mainstream of policymaking. At the same time, there is an ongoing expansion of Southern actors – including subnational entities such as municipal and provincial governments and non-state stakeholders such as the private sector, civil society and academia – that are utilising SSC approaches to carry out their core functions.

SSC has to be understood as an important and complementary framework to traditional North-South Cooperation. However, despite its remarkable gains, SSC also faces multiple developmental challenges, and it is in this context

that this innovative modality, together with Triangular Cooperation, must play its role in the arena of development.

SSC in the United Nations system

In the United Nations development system, SSC emerged as an appropriate and innovative instrument of technical cooperation in the 1970s when countries of the world, precipitated by an unprecedented series of financial and economic crises, negotiated a new international economic order. Within the same process, developing countries sought dependable avenues for achieving economic and social progress through collective, self-reliant measures.

That led to the convening of the United Nations Conference on Technical Cooperation among Developing Countries, held in Buenos Aires, Argentina, in September 1978 (BAPA). The Conference adopted a landmark plan of action with comprehensive guidelines for the United Nations, other intergovernmental organizations, and other stakeholders to observe and incorporate into their development policies and programmes. Those guidelines aimed at promoting the sharing of experiences, technological and managerial expertise, training facilities, and other creative assets among developing countries in various socio-economic spheres in the spirit of solidarity and friendly cooperation and on mutually agreeable and affordable terms. Also included in those guidelines was a role for developed countries, a catalytic, facilitative and supplementary role, which has brought triangularity to this mode of cooperation. All that was carefully crafted to ensure the fullest respect for national sovereignties and ownership, and avoidance of compulsive and uncomfortable conditions in all South-South and Triangular Cooperation policies and operations.

United Nations Office for South-South Cooperation

Hosted by UNDP since 1974, the United Nations Office for South-South Cooperation (UNOSSC) was established by the General Assembly of the United Nations with a mandate to advocate for and coordinate South-South and Triangular



Global South-South Development Expo 2017

Cooperation on a global and United Nations system-wide basis (A/Res/71/244; A/67/39). UNOSSC receives policy directives and guidance from the General Assembly and through its subsidiary body, the High-level Committee on SSC.

Since the adoption of BAPA, UNOSSC has served as the secretariat of the High-level Committee and, in this role, it has catalysed, coordinated and supported the use of South-South and Triangular Cooperation methodologies and approaches in development programmes and activities of the organizations of the United Nations system, other intergovernmental and nongovernmental organizations, and other stakeholders.

Member States have directed UNOSSC to take innovative actions with regard to, among others, forging strategic South-South and triangular partnerships, with a view to scaling up South-South successes (SSC/19/2).

UNOSSC's partnership with the Islamic Development Bank

One of the partnerships that UNOSSC has forged is with the Islamic Development Bank (IsDB). Given the rising demand for SSC and regional solutions, the partnership with IsDB is being reviewed and will be scaled up in the future.

UNOSSC's partnership with IsDB began in the mid-1980s when the two organizations convened a joint seminar in Jeddah for senior government officials of IsDB's member countries to orient them to the value and worth of utilising SSC modalities in developmental tasks and to identify organizational arrangements for the effective coordination and promotion of SSC at the national and intercountry levels.

In the seminar, government officials identified some distinct comparative advantages of SSC over traditional North-South Cooperation, notably, its cost-effectiveness; avoidance of brain drain; greater relevance of sharing policies and methods that are in use in other developing countries under somewhat familiar socio-economic conditions and cultural environments; the possibilities of continuity of linkages between cooperating institutions of two or more developing countries even after the completion of programmed project activities among them; and continued job security for employees and experts of institutions of the Global South on their return from completion of missions in other countries of the South. Another notable comparative advantage concerned the value of industrial policies of countries of the Global South, which would usually be more labour-intensive and job-creative than the capital-intensive policies of the North.

In subsequent years, UNOSSC and IsDB collaborated in assisting IsDB member countries in organizing capacities and needs matching (CNM) events in which attributes such as expertise, training facilities, and consulting services, available in member countries in different socio-economic sectors, were shared with other member countries in the spirit of solidarity and on mutually affordable terms. Some examples of the agreements reached at a CNM event of this nature in one country, Pakistan, are summarised below:

 Algeria had experienced the need for experts to assist in conducting an economic and feasibility study for manufacturing automobile components and spare parts for diesel engines in the country and for training of trainers in those fields. That led to a successful South-South partnership between a private company in Pakistan and a public corporation in Algeria, with supplementary support from IsDB.

- Cameroon had stated that it had no set-up for manufacturing insecticide sprayers, which were being imported at exorbitant costs. In view of the growing need for sprayers, especially for agricultural crops, the authorities were planning to set up a manufacturing plant in the country and needed experts to assist in conducting a feasibility study and in setting up the plant. The study was carried out, and the establishment of the manufacturing plant was accomplished through cooperation between a private company in Pakistan and a government institution in Cameroon, with supplementary support from IsDB.
- Pakistan needed training of its scientists and technologists in the use of certain types of laboratory equipment which had become available in Saudi Arabia. Friendly discussions between the relevant authorities of the two countries resulted in the provision of training in Saudi Arabia, with supplementary support from IsDB.

These examples are illustrative, and development projects of this nature emanating, as they did, from CNM events organized by several other IsDB member countries, notably Egypt, Tunisia and Turkey, had quite a positive impact on the development of the countries concerned, leading to increased productivity, employment generation, import substitution and even a boost to the respective countries' export potential. Besides, many of the contacts established among the cooperating countries' institutions through those technical exchanges have flourished over the years, fostering the spirit of solidarity and cooperation among them.

In recent years, collaborative relations between UNOSSC and IsDB have been shaped by the changing needs of the time. During biennial meetings on cooperation between the United Nations and the Organisation of Islamic Cooperation (OIC), both organizations have joined with their respective agencies and institutions in identifying priority projects of assistance to member countries in their effort to achieve the objectives of the 2030 Agenda SDGs, especially in the areas of poverty eradication; food security and agriculture; transport infrastructure; entrepreneurial development; sustainable tourism; women and youth empowerment; climate change; and healthcare.

Of particular significance in these areas of cooperation, UNOSSC, in partnership with IsDB and a number of other key regional and global stakeholders, is supporting Member States in the Arab States region, Europe and the CIS in

advancing their respective South-South and Triangular Cooperation agendas. Civil society, academia and the private sector as well as the United Nations development system are also engaged at all levels. Leveraging these partnerships, Regional Networking Forums, organized by UNOSSC, have created an open and conducive knowledge sharing setting in order to support stakeholders in further improving their understanding of trends and opportunities. More information, including information on the mapping of successful solutions in the region is available at http://www.arab-ecis.unsouthsouth.org/library/publications/

Forums for Businesswomen have also been organized by the Islamic Chamber of Commerce, Industry and Agriculture (ICCIA), with support from UNOSSC and IsDB. At these forums, women-owned and/or womenheaded enterprises from ICCIA's 57 member countries come together to discuss and seek solutions to common issues and develop business partnerships.

UNOSSC and IsDB are being represented at meetings of each of the organizations' governing bodies where their advice and interventions on matters of respective interest and competence have been welcomed.



Jorge Chediek, Envoy of the Secretary-General on South-South Cooperation and Director, UNOSSC, speaking at the Global South-South Development Expo 2017



High-level ministerial meeting in Antalya, Turkey, organized for the partnership initiative on South-South and Triangular Cooperation for Agricultural Development and Enhanced Food Security, jointly supported by the Islamic Development Bank, the United Nations Office for South-South Cooperation, and the International Fund for Agricultural Development

More recently, IsDB has joined UNOSSC in mapping the SSC capacities of IsDB member countries and disseminating the information widely, thus facilitating a better understanding of those capacities and the tapping of the latter by those in need. IsDB is also participating in UNOSSC-organized annual Global South-South Development Expos, including their leadership forums, and effectively contributing to the policy dialogues on SSC being pursued at these events.

While continuing the partnership in these areas, UNOSSC and IsDB are planning to develop, in the foreseeable future, joint knowledge products on SSC in a consumable format so that best practices can be shared with partners as widely as possible. A complementary area to be covered would be the crafting of joint capacity development programmes on SSC. This will entail, among other items, the strengthening of SSC National Coordinating Authorities (NCAs) leading to a joint capacity development programme that would identify key issues and needs being faced in advocating and operationalising the use of SSC modalities in developmental, environmental and humanitarian activities at national and intercountry levels.

In this and other fields of endeavour, both partners in development would, admittedly, be facing challenges – both new

and familiar – but their experiences together in the support and promotion of SSC have taken them far enough to know that the journey ahead is possible, endurable and worthwhile.

Mapping of South-South cooperation solutions in the Arab States, Europe and the CIS

Developed with the support of IsDB and the United Nations Development Programme (UNDP), 2013–2014, a solutions mapping portal was designed and operationalised to provide access to successful development solutions from the Arab States and to support UN agencies and national stakeholders in the region by enhancing their capacities to share and source successful replicable solutions. Further partnership support from IsDB allowed the expansion of coverage to the Europe and CIS region during 2015, as well as maintaining constant populating of the portal in 2016 and 2017.

Development actors from the public and private sectors as well as civil society institutions in the regions were encouraged to contribute to South-South knowledge exchange by sharing their successful, homegrown solutions in various sectors of development, including rural and agricultural, ICT, healthcare, education, and women's rights. To provide wider

access to this knowledge, electronic publications on mapping South-South cooperation solutions in Arab States and in the Europe and the CIS region have been developed and placed online, following a similar publication for Arab States of 2014, highlighting new, successful replicable experiences.

Regional Networking Forums for Arab States, Europe and the CIS

Initiated by UNOSSC and supported by many development partners, the Regional Networking Forums are held regularly to create a conductive knowledge-sharing space for the Directors General to aid development cooperation in Arab States, Europe and the CIS countries in advancing South-South cooperation in various development areas. IsDB has been providing partnership support to these forums and has substantially contributed to the organization of the 2nd (Astana, Kazakhstan, June 2017) and the 3rd (Antalya, Turkey, November 2017) Regional Networking Forums.

Capacity building for the coordination of SSC

Recognising the importance of capacity building in the coordination of SSC and technical cooperation for attaining the objectives set in the 2030 Agenda for Sustainable Development, IsDB has contributed to the development of certified training programmes, elaborated by UNOSSC and the UN System Staff College Knowledge Centre for Sustainable Development.

IsDB also financially supported the participation of representatives of development cooperation/SSC agencies from the OIC countries in training conducted for governmental SSC focal points and for representatives of Technical Cooperation Agencies from Arab States, Europe and the CIS. The three-day session, conducted in Astana, Kazakhstan in June 2017 as a pre-event to the 2nd Regional Networking Forum, focused on the trends, models and benefits of SSC in implementing national strategies toward implementing the 2030 Agenda for Sustainable Development. It resulted in raising awareness of practical tools for coordinating SSC to better harness the opportunities of this cooperation flow.

Joint training for the ministries of agriculture in Arab States, CIS and Eastern European countries

Eight capacity building training sessions on coordination and maximising benefits of SSC for agricultural development in the context of the 2030 Agenda for Sustainable Development have been organized and delivered to the key staff of the Ministries of Agriculture within the implementation of the South-South and Triangular Cooperation for Agricultural Development and Enhanced Food Security partnership initiative, which is jointly supported by IFAD, IsDB and UNOSSC. 167 staff were trained in Algeria, Hungary, Kyrgyz Republic, Morocco, Sudan, Tunisia, Turkey and Uzbekistan.



Ahmed Faruk Diken of the Islamic Development Bank, speaking at The Third Regional Networking Forum for Arab States, Europe and the CIS on South-South and Triangular Cooperation

BADEA's technical assistance to Africa — an SSC paradigm

Prof. Mekki El Shibly, Executive Director, Mamoun Beherie Centre for Economic and Social Studies and Research in Africa; Lubna D. Ahmed, Strategic Studies and Corporate Development; Shahad Khidir, Young Professional Programme, Marketing Expert, Arab Bank for Economic Development in Africa

he Arab Bank for Economic Development in Africa (BADEA) is an independent international financial institution owned by 18 Arab countries, members of the League of Arab States (LAS). BADEA was established in 1974 and enjoys a unique characteristic, distinguishing it from other development financing institutions, in that the Arab countries owning its capital are not eligible for its financing. Furthermore, the beneficiaries are African countries, not members of LAS.

BADEA aims at strengthening economic, financial and technical cooperation between Arab and African countries, creating one of the most successful examples of South-South Cooperation (SSC). BADEA's assistance to African countries represents an integral part of the Afro-Arab cooperation, which is regarded as the oldest and most successful SSC model. This unique partnership involves a broad framework for collaboration among Arab and African countries in the economic, social, cultural, environmental and technical domains. Although this form of cooperation is initiated and organised by governments, active participation from the private sector, non-governmental organisations and individuals has been critical to its success. This partnership involves the sharing of knowledge and experience, training, technology transfer and financial cooperation. BADEA's guiding principle in this form of SSC is a manifestation of solidarity among peoples of Arab and African countries that contributes to their national well-being, their national and collective self-reliance and the attainment of development goals.

To achieve its objectives, BADEA is mandated to contribute to the financing of economic development of African countries, encourage the participation of Arab capital in African development and contribute to the provision of the necessary technical assistance for development in Africa. In an appreciation of the economic difficulties encountered by most African countries eligible to BADEA's assistance, they receive its loans at highly concessionary terms with a high grant element and no binding conditions. The technical assistance support to these countries is given in the form of non-refundable grants.

BADEA rejuvenates physical planning and urban design in Uganda

BADEA's provision of an Arab expert as institutional support to the Ugandan Ministries of Local Government and Land Use, is a robust example of the accomplishments of technical assistance programmes in transforming Africa. The assistance was provided by BADEA to enhance the capacity of the two ministries' urban planning departments as well as to boost their capability to absorb the consequences of high population growth rates.

The Arab expert terms of reference included upgrading the performance of human resources through the formulation of a new organizational and operational structure at the two ministries, identifying employees' training needs and implementing the training accordingly. Also, creating detailed urban area plans, and preparing case studies of regional master plans and detailed projects.

The outcome-based evaluation of BADEA's institution building support reveals considerable success. The stakeholder interviews at the Ministry of Local Government, and visits to two local councils (Kira and Mukono Municipal Councils), show that BADEA's Arab expert was instrumental in revitalising Uganda's Physical Planning Act 2010, and prioritising urban planning. BADEA's expertise was also crucial in reviewing the Planning Act and making recommendations for appropriate amendments. Also providing valuable assistance in implementing the Act's clauses relating to the establishment of urban planning committees in local governments, and the emphasis on the importance of urban and rural planning.

The BADEA expert was also actively involved in the preparation of memoranda of understanding between the Ministry's strategic partners including Makrere University and the World Bank. The partnership with the World Bank aims at enhancing the institutional performance of local governments leading to improved urban services through additional funds to enhance investment in urban infrastructure and capacity building programmes.



Rural women empowerment project in Senegal

During the period 1975–2016, total BADEA cumulative commitments stood at US\$5,095.883 million, out of which US\$4,925.17 million was allocated to finance 631 development projects. Also, US\$170.713 million has been allocated to finance 696 technical assistance operations. Out of this, feasibility studies received US\$75.767 million (44.38 per cent of the total) while US\$94.946 million (55.62 per cent) was allocated for institutional support in African countries to cover the provision of services of Arab experts to transmit knowledge and expertise to local cadres. A total of 132 highly qualified Arab experts were approved for work in African countries between 1991 and 2016 to cover advice on infrastructure (37.32 per cent), finance (28.17 per cent), agriculture and rural development (24.65 per cent), social sectors (4.23 per cent), industrial sectors, and energy and other sub sectors (5.63 per cent).

In response to the escalating need of African countries for human resource development, BADEA has drastically increased its allocation of training and capacity building, completing 244 training programmes during the period 1975–2016. More than 10,000 African trainees have benefited from these courses through enhanced contribution to the implementation of development projects. The keenness of BADEA to restrict capacity building activities to Arab and African training institutions provided yet another testimony of its desire to consolidate the SSC rationale.

BADEA's feasibility studies succeeded in facilitating approximately 160 development projects in various sectors including transport, energy, agriculture, water, health and education, where BADEA and other partners contributed in financing those projects.

The institutional support given to African countries also included contribution to the organisation of Arab-African trade fairs, in cooperation with the secretariats of the League of Arab States and the African Union. BADEA's participation included funding the cost of preparing stands for exhibitions and covering expenses of logistics and transportation of exhibitors' displays for African participants. To date, the contribution has included the organisation of the seven Arab-African joint trade fairs leading to the enhancement of trade flows between Arab and African countries. Operations also included the provision of office and medical equipment for some African institutions; financing forums for Arab and African consulting firms and for Arab and African businesswomen; organising meetings for chambers of commerce and industry in Africa and the Arab world; meetings for high-level experts in the field of food security; and meetings for Arab and African experts on investment prospects in Africa.

To trace the impact of BADEA's technical assistance in contributing to the national well-being of the recipient African countries through the sharing of knowledge,



Agro products processing training in Senegal

experience, training and technology transfer, an impact assessment questionnaire was conducted, where 81 per cent of the respondents believed that BADEA's technical assistance programme had contributed effectively to the enhancement of socio-economic development in African countries. Moreover, the performance indicators have also revealed that more effort needs to be exerted by BADEA to synchronise its technical assistance support with the priorities of the beneficiary countries.

Although, compared to best practice in this field, the performance indicators of the technical assistance activities reflect satisfactory handling of the recipient requests, BADEA is revising its technical assistance provision. This encompasses enhancing BADEA's awareness of the nature of African capacity building required for realising their strategies. Efforts are also under way to monitor the technical assistance operation's cycle in a fashion similar to the project cycle. Also, special attention will be made to cover all stages of the operation from identification to post-evaluation. Furthermore, arrangements are being made to augment the timely communication with the executing bodies in the recipient countries to resolve the problems impeding the timely implementation of the technical assistance activities.

As for capacity building operations, a new definition will be adopted to include institutional, organisational and individual activities. BADEA will also enlarge its utilisation of private sector training institutions in Arab countries in implementing its capacity building programme in African recipient countries. This is expected to impact favourably

Agro Products Processing and Marketing in Senegal – women's empowerment through income-generating activities

BADEA partnered with the Islamic Development Bank, the Arab Center for Training and Research, Cawtar, and the Association of West Africa to conduct a capacity building programme as part of its technical assistance in 2015 to the rural areas of Senegal – Kaollack, Louga and Fatrik. The training targeted 120 rural women as primary beneficiaries, more than 600 rural women as secondary beneficiaries, and around 1,200 families as tertiary beneficiaries.

The main objective of the programme was to raise the efficiency of women in agro product processing and marketing to economically empower them by developing their knowledge and productivity and improving their marketing skills.

On completion of the programme, the beneficiary women were able to process and add value to their agro products using their newly learned production skills. They were also able to enter new markets and, using their new marketing skills, were able to market their products and create a sustainable competitive advantage for their small projects. Furthermore, they became aware of their economic rights as well as further opportunities and the value of their role in community participation.

Overall, the programme was able to add a sustainable value to the agro products of the women of rural Senegal.

in the sharing of experience and modern technology within the framework of SSC.

BADEA's potential activities targeting technical cooperation with the African recipient countries will include augmenting the organization of technical and scientific conferences that address the vital issues influencing these countries. Issues include climate change, natural disasters such as floods, desertification and epidemics, as well as the development of strategies in sub-Saharan countries aiming at fostering SSC. BADEA will also support the organizing of conferences aiming at promoting trade among African countries and between African and Arab countries. The future technical assistance operations will also focus on organising meetings for civil societies in Sub-Saharan African countries to support the capacity of women, youth and children to enhance their contribution to the continent's socio-economic welfare.

Efforts will also be devoted to adapting BADEA's technical assistance operations to the requirements for the successful implementation of the Sustainable Development Goals 2015–2020 and the Agenda for Africa 2063. This includes organising training programmes and conferences for relevant African cadres involved in the implementation of the approved initiatives such as the Comprehensive Africa Agricultural Development Programme (CAADP), the New partnership for Africa's Development (NEPAD) and the Programme for Infrastructure Development in Africa (PIDA).

In view of the momentous role played by the private sector in the economic development of Sub-Saharan African countries, BADEA's technical assistance programme will include

allocations for the preparation of feasibility studies for private-public partnership projects that the private sector is involved in financing. BADEA's technical assistance support will address the facilitation of the partnership between the public and private sector and prepare the African countries to embrace such joint projects. The programmes will include studies to develop the appropriate legal and legislative framework for partnership projects; the provision of training to qualify national cadres in the relevant legal, financial and institutional fields; and the preparation of engineering, environmental and marketing studies related to partnership projects especially in the fields of energy, water and transportation. Furthermore, technical support will also be made available for organizing conferences to promote partnership projects and the provision of Arab experts in the field of public-private partnership projects.

BADEA also intends to invigorate its highly successful collaboration with the Arab development financing institutions in the field of technical assistance with the objective of implementing longer term training and sector study programmes of up to five years. This includes broadening BADEA's fruitful cooperation with the Islamic Development Bank by adopting its Reverse Linkage initiative which aims at sharing knowledge, expertise and technology within the framework of SSC. BADEA aspires to play a linking role between the centres of excellence that supply to the technical service sectors in the Arab countries and those centres receiving technical service in the African countries, to achieve mutually beneficial, result-oriented and programme-based outcomes.



Agro products processing training in Senegal

Triangular Cooperation — characteristics, realities and opportunities

Nadine Piefer and Juan Casado-Asensio, OECD Development Cooperation Directorate

riangular Cooperation can help achieve the Sustainable Development Goals (SDGs) in innovative and collaborative ways and provide solutions to overcome today's environmental, economic and social constraints to development. In addition, according to the results of surveys that the Organisation for Economic Cooperation and Development (OECD) conducted in 2013 and 2015, Triangular Cooperation is on the rise.

Such observations can explain why a core group of countries and international organisations, including the Islamic Development Bank (IsDB) and the OECD, are supporting the new Global Partnership Initiative (GPI) on effective Triangular Cooperation which is providing a global platform for exchange and promoting analysis, advocacy and awareness-raising that will better situate Triangular Cooperation in the current development landscape.

The main comparative advantage of Triangular Cooperation is that all partners transfer knowledge and expertise which encourages co-creation and can lead to additional benefits, including enhanced ownership of the activity, the transfer of solutions that are cost-effective and better adapted to the needs of the beneficiary country, or the establishment of a partnership that continues beyond the duration of the activity. In fact, the first meetings on Triangular Cooperation in Lisbon (in 2012 and 2013) organised by the Government of Portugal and the OECD paved the way for a deeper understanding of Triangular Cooperation. The members of the GPI took up the conclusions from these dialogues that Triangular Cooperation is a modality in its own right that requires at least three roles being represented, with each potentially having more than one actor:

- The facilitator helps to connect countries and organizations to form a triangular partnership and gives financial and/or technical support to the collaboration
- The pivotal partner often has proven experience and shares its resources, knowledge and expertise through Triangular Cooperation
- The beneficiary partner is the target for the development results to be achieved in line with their national

development priorities and needs. It is responsible for ensuring that results are sustainable.

Partners can take on various aspects of all roles throughout the lifetime of the collaboration or can play different roles in other activities or partnerships. This understanding has been used when talking about Triangular Cooperation in this article.

Key characteristics of Triangular Cooperation

Interest in Triangular Cooperation is long-standing, yet most studies have focused on the experiences of Latin America and the Caribbean and its use by members of the OECD Development Assistance Committee (DAC). Through its analytical work and efforts to build up the evidence base, the OECD has found that Triangular Cooperation takes place across the world, including among the IsDB member states. The key characteristics are:

Characteristic #1

The OECD surveys found an increase in the number of Triangular Cooperation projects as well as their budgets and durations, which indicates a growing interest in the benefits that Triangular Cooperation can bring. The OECD is working to track and measure triangular activities more accurately through its statistical system.

Characteristic #2

Triangular Cooperation is typically planned using the same procedures as any other cooperation project. Guidelines have been developed in many countries, international organizations and regions, for instance by the Ibero-American Programme for the Strengthening of South-South Cooperation (PIFCSS). The GPI is compiling available guidelines in other countries and regions.

Characteristic #3

The OECD is developing a toolkit to evaluate Triangular Cooperation activities better by capturing their compara-

tive advantage more systematically. The participants of the OECD's last Lisbon meeting in 2016 had the following preliminary thoughts on where Triangular Cooperation adds concrete value, by:

- Promoting trusting, stable and horizontal partnerships
- Fostering partners' complementary strengths to achieve development results
- · Sharing knowledge
- Co-creating solutions to development challenges that are innovative, affordable and context-specific
- Promoting additional resources and institutions to enhance the volume, scope and sustainability of Triangular Cooperation projects
- Promoting more effective development cooperation, regional integration and shaping a common understanding of international development.

Characteristic #4

The work of the OECD is providing evidence on how partners work trilaterally in the Middle East and North Africa (MENA) region – without necessarily labelling it as such – often due to the lack of an internationally agreed definition that goes beyond 'simply' supporting South-South Cooperation. Triangular Cooperation in the MENA region targets a wide range of sectors and, interestingly, project types vary as well, from capacity building and technical cooperation interventions, to working with civil society, to large multi-annual financial investments, at times including the private sector.

The OECD's new working paper on this topic shows that these Triangular Cooperation activities can provide development experiences and lessons for all providers of development cooperation working in the MENA region on, for example implementing partnerships in fragile contexts; integrating triangular approaches into larger development cooperation programmes, such as IsDB's Reverse Linkage initiative; and supporting providers of development cooperation in the MENA region, as IsDB is doing with the technical cooperation agencies of countries such as Morocco or Tunisia – and further afield, for example Turkey, Indonesia or Azerbaijan.

The OECD's work on Triangular Cooperation and its collaboration and exchange with its partners, such as Brazil and IsDB, has illustrated that Triangular Cooperation has the potential to contribute to achieving the SDGs, yet this contribution is not widely recognised. More evidence and analysis is needed to raise awareness of its contribution and to make full use of and mainstream Triangular Cooperation as a means to achieve the SDGs. For instance, solutions to pressing global challenges, such as forced migration and climate change – just to name a few.

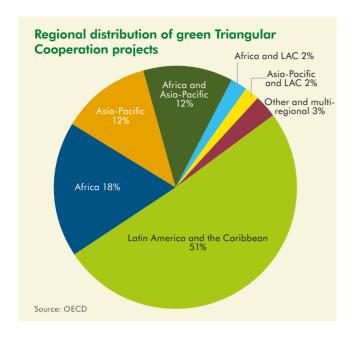
Triangular Cooperation tackles global challenges such as forced migration

On the issue of hosting and integrating refugees through Triangular Cooperation initiatives, providers in the MENA region work, for instance, with Germany or Japan. Germany takes a programmatic approach that includes triangular activities as a component of larger bilateral or regional programmes and funds in the MENA region. This way of working provides flexibility and ensures ownership by all partners, as projects are jointly planned, financed and implemented with the facilitating and beneficiary partners both coming from the MENA region. Activities aim to strengthen civil society structures and contribute to reducing poverty through microfinance and financial inclusion of marginalised groups, such as women and youth.

One example is the Safe and Creative School Spaces Programme in Jordan, under the Madrasati Initiative of the Queen Rania Jordan River Foundation. The German Open Regional Fund has financed this initiative with the OPEC Fund for International Development (OFID) since 2015. The project is a response to the Syrian conflict and the influx of over 660,000 registered Syrian refugees in Jordan, of which approximately a third were of school age. In a closely co-ordinated and jointly designed approach, OFID funds the maintenance of eight school buildings in targeted areas; Germany supports training for teachers and extracurricular activities for Jordanian and Syrian students in the same schools; and the Madrasati Initiative also contributed to both areas.

Madrasati - Safe And Creative School Spaces

Partners	Queen Rania Jordan River Foundation Jordan (Madrasati Initiative)
	Germany (GIZ)
	OPEC Fund for International Development
Objective	To improve the quality of education, both for Jordanian and Syrian refugee students, to empower them through enriching the classroom and after-school learning and providing them with life skills that are necessary to contribute to social peace in the Jordanian host communities. Interventions are made in eight schools which are particularly affected by the influx of Syrian refugees.
Budget	US\$1 billion from the Madrasati Initiative
	US\$720,000 from OFID
	US\$520,000 from GIZ
Project period	2015–2018
Source: OECD	



"Green" Triangular Cooperation

By using data from the OECD's 2015 survey on Triangular Cooperation, an exploration was made as to how Triangular Cooperation contributes to achieving 'green' goals. Achieving the SDGs requires addressing the global environment directly – for example SDGs 13 on climate action, 14 on life below water and 15 on life on land – as well as dealing with environmental issues linked to other development activities and goals – for example SDGs 7 on affordable and clean energy, 11 on sustainable cities and communities or 12 on responsible consumption and production.

All countries aim to implement the Paris Agreement on climate change, as well as other environment-related agreements on biodiversity, desertification or disaster risk and resilience. The year 2015 was a turning point in the cooperation arena on global climate change because, under the principle of common but differentiated responsibilities, not only did Annex A countries of the Kyoto Protocol commit to dedicating funds and expertise, but all countries, irrespective of their income status and historical responsibility, agreed to work on tackling climate change. Given this change, South-South and Triangular Cooperation are likely to gain more importance as modalities to achieve internationally agreed climate goals in the years to come.

'Green' Triangular Cooperation can be understood as activities that target local environmental issues, such as tackling water pollution or enhancing air purity, as well as global environmental goods, such as adapting and mitigating climate change, stopping biodiversity loss or desertification. Using this understanding, it is found that one quarter of the Triangular Cooperation projects gathered through the 2015

OECD survey target 'green' objectives as their main aim. Of these, three quarters have a 'significantly green' objective, indicating that 'green' issues are being integrated into Triangular Cooperation activities with other primary objectives (75 per cent of the projects). This is especially the case for local environment-related Triangular Cooperation projects. The remaining one quarter have a 'principally green' objective, which implies that they would not have been funded if they had not had this 'green' objective. In this category, the majority of projects are climate-related. Surprisingly, not a single project was reported with a desertification-related aim and only one 'brown' project was reported - that is, a Triangular Cooperation activity that targets objectives that go against the environment (in this case, promoting the use of fossil fuels). Half of the green projects are in Latin America and the Caribbean. This finding shows that Triangular Cooperation is a useful tool for promoting 'green' objectives.

The Global Partnership Initiative on effective Triangular Cooperation

As these various examples show, Triangular Cooperation has great potential to forge inclusive development partnerships that are fit for the future. In this spirit, the Global Partnership Initiative was launched at the 2016 High-level Meeting of the Global Partnership for Effective Development Cooperation in Nairobi as a multi-stakeholder initiative. It is being led by a core group that includes Canada, IsDB, Japan, Mexico, the OECD and the UN Office for South-South Cooperation.

Governments, international organizations, civil society organizations, and private sector representatives participate in the initiative through three workstreams (advocacy, analytical, and operational) which aim to analyse, and systematize, experiences and best practices; elaborate a set of voluntary principles; and consolidate frameworks of Triangular Cooperation that ensure country-led ownership as well as inclusive partnerships for sustainable development. Results of its work will feed into preparations for the second High-level United Nations Conference on South-South Cooperation in Buenos Aires (BAPA+40 Conference) in March 2019.

The OECD will continue supporting providers of development cooperation in their deployment of Triangular Cooperation activities through further analytical work, compiling activities and reports, tracking this modality through its statistical system and contributing to the Global Partnership Initiative. The OECD's collaboration with IsDB has, in this sense, been highly relevant to dispel some of the myths surrounding Triangular Cooperation and to ensure that Triangular Cooperation is well-represented at the BAPA+40 Conference.

South-South Cooperation: a pioneering model for sustainable development in OIC Countries

Onur Çağlar, Technical Cooperation Specialist, Statistical, Economic and Social Research and Training Centre for Islamic Countries (SESRIC), a subsidiary of the Organisation of Islamic Cooperation

n the eve of the 40th anniversary of the adaptation of the Buenos Aires Plan of Action (BAPA), the main milestone for technical cooperation among developing countries of the Global South adopted at the United Nations conference in 1978, countries have embarked on an ambitious and transformative sustainable development agenda. Many lessons have been learned over the past 40 years and concrete results have been achieved especially over the last two decades. Nonetheless, the recent international development agenda, shaped by both the 2030 Agenda for Sustainable Development, Paris Agreement and the Addis Ababa Action Agenda, introduced more determined joint commitment for sustainable development and stressed the important role of South-South Cooperation (SSC) along with Triangular Cooperation in the achievement of the Sustainable Development Goals (SDGs).

The Organisation of Islamic Cooperation (OIC), with its 57 member states, constitutes the second largest intergovernmental institution after the United Nations. The countries are dispersed over a large geographical region, in four continents. They constitute a substantial part of the world's



The Organization of Islamic Cooperation (OIC) was founded in 1969, consisting of 57 member states spread over four continents

developing countries and, as a group, are well-endowed with high potential in terms of both human and natural resources in various fields and sectors such as energy (mainly oil and gas), agriculture, arable land and a vast, strategic trading region. These countries are also considered among the leading beneficiaries, as well as providers, of SSC and engage in collaboration of a more technical nature compared to the time of the adaptation of BAPA. Since that time, the SSC tools and methods, developed and revised in line with demand-driven approaches, have convinced the OIC countries to adopt the spirit of cooperation among themselves, focusing on mutual learning, exchange of expertise and experience, cross-regional exchange of ideas and approaches, peer-to-peer dialogue and capacity development.

Over recent decades, however, the majority of OIC countries have faced certain challenges such as political and economic instability, poor resource mobilisation, inadequate institutional arrangements, and an insufficient legal regulatory framework. These challenges caused the potential of OIC-level SSC to remain largely untapped. The OIC countries, as a group, have huge potential in terms of both human capital and natural assets, yet this potential has not been properly realised. This reflected in the weak performance of many individual member countries and of the group as a whole, compared to the rest of the world. For example, accounting for 23.4 per cent of global population, OIC countries contributed only 8.4 per cent to the world's total GDP at 2016 prices. OIC countries exports accounted for only 8.8 per cent of the world total in 2016, the lowest figure observed since 2005. OIC countries were able to attract only 6.6 per cent of the world's total foreign direct investments in 2016, according to the annual economic report on the OIC Countries, 20171.

The challenges of the OIC countries differ from state to state and vary according to the development level. For instance, High Income Countries (HICs) of the OIC, mainly in the Gulf region, face policy challenges related to ensuring integration of SSC with the 2030 Agenda and the incorpo-

ration of SSC into national and regional strategies. Middle Income Countries (MICs) and Least Developed Countries (LDCs) on the other hand, have challenges that relate primarily to institutional issues such as securing sustainable funding and political stability. Fragile OIC States also struggle with certain capacity gaps and lack the ability to assess and identify the urgent needs of the state in order to demand from the potential provider states.

SSC within the OIC community represents a promising alternative to traditional cooperation and development assistance. Indeed, the OIC community has an advantageous composition of values and principals as well as strong economic and human potential, but these attributes are used inappropriately. However, the possibility of profiting from this potential is seen as a way for the OIC community to become stronger in influencing mechanisms at global level and strengthening the idea of the human being at the core of development.

SSC enables a change in traditional donors through the introduction of new development players. Likewise, developing OIC countries will move from being recipients to donors, influencing the world global architecture, offering further options for the least developed countries and strengthening solidarity and self-reliance among the Muslim community.

Within this framework, OIC SSC aims at utilising capacities and experiences available in the OIC countries and enabling mutual learning and capacity development among them. These countries have more opportunities than before to enhance innovation and cooperation mechanisms among themselves by sharing knowledge and experience in several cooperation areas. Given the diversity and richness of political and institutional frameworks and mechanisms, the critical issue is not the existence of the necessary knowledge resources within the OIC community, but the dissemination of local knowledge and transferring it from one context to another.

Since its establishment in 1978, the Statistical, Economic and Social Research and Training Centre for Islamic Countries (SESRIC) – the main research and training organ of the OIC, whose membership is drawn entirely from the developing and the least developed countries – is a focal point for South-South technical cooperation and the broker for the exchange of knowledge, experiences and best practice among the OIC countries. SESRIC has launched many programmes and activities to address the development challenges of OIC member states through using SSC approaches and tools.

SESRIC and the Islamic Development Bank (IsDB) are the two central technical bodies of the OIC and are longstanding partners for supporting the development efforts of the OIC member states. Mutual cooperation over more than

35 years has culminated in Reverse Linkage (RL) cooperation that has enhanced national capacities within the last three years. SESRIC's commitment to cooperate in the RL project, together with other stakeholders, has resulted in reaching out to five countries as of November 2017 and, with its involvement in diagnostic and validation visits, it estimates that RL cooperation will reach The Gambia, Uganda, Pakistan, Sudan, Suriname, Bangladesh and Indonesia by mid-2018.

Reverse Linkage in The Gambia: capacity development of the School of Medicine and Allied Health Sciences of the University of The Gambia (SMAHS)

SMAHS is the main source of supply of medical doctors, nurses, public health and other related healthcare professionals in The Gambia. Despite the support of doctors from Cuba, Egypt and Syria, there is a huge shortage of national academic staff to train medical students as well as a dire need to enhance capacity and reduce the reliance on visiting doctors.

Against this background, in 2014, the government of The Gambia requested the government of Turkey to support its capacity need in the health sector through IsDB's RL mechanism. Thereafter, SESRIC, in its capacity as provider of vocational education and training (VET); the Turkish Cooperation and Coordination Agency (TİKA), in its



The observership programme aims to provide skill development training for 25 Gambian medical staff over a total of 73 weeks

capacity as the government of Turkey's main technical cooperation agency; and the Yıldırım Beyazıt University as a provider of expertise, participated in the project as the main partners.

The project, with a budget of US\$1,200,000, seeks to boost the capacity of SMAHS by providing necessary and sustainable training to Gambian medical professionals and adequately equip the laboratories, upgrade the curriculum and improve the SMAHS ICT infrastructure in line with The Gambia National Health Policy 2012–2020 and the 10-Year Strategic Framework of IsDB. The project was inaugurated in September 2016 with the skills development component of the SMAHS medical teaching staff. The renovation of the laboratories and provision of the necessary equipment is planned for 2018 and the project is due for completion in the first quarter of 2019.

Reverse Linkage in Uganda: the Islamic University in Uganda Vocational Training Centre Project

Figures on Uganda's labour market structure, especially unemployment rates, highlight a skills mismatch as well as VET-related challenges of the job market. In 2013, youth unemployment at 11.1 per cent was higher than the average for the entire working age population of 9.4 per cent. Female youth unemployment at 10.9 per cent, was higher than male unemployment of 8.1 per cent.² In the light of this, the RL project aims to meet vocational training needs in Uganda, especially for some specific training branches that are instrumental in producing qualified personnel in sectors such as carpentry, metalwork, ICT, construction, photography, web design, culinary arts, and bee keeping. This aims at preparing young people in Uganda to meet the current demands of the job market.

The project is of the utmost importance in that it addresses the challenge of inadequate skills among the youth, and is targeted on increasing the capacity of the Islamic University in Uganda (IUIU) in the field of technical vocational education. The project is run by the main partner institutions: IsDB, TİKA, SESRIC, and the Istanbul Metropolitan Municipality Lifelong Learning Center (ISMEK) with a total joint pooled resource of approximately US\$1 million, and planned for launch in 2018. IsDB's Technical Cooperation Programme has been put into practice through organizing an on-the-job training programme in Istanbul to lend impetus to the project, which includes capacity building training and equipment supply for the training-of-trainers programmes. The objective is that, by the end of the project, the IUIU will be set up to sustain its vocational education programmes with competent trainers and within a fully equipped and modernised institutional environment.



Study visit to the Turkish embassy in Kampala, Uganda. Turkish national institutions, TİKA, YBU and YTB will be Reverse Linkage project providers



Kampala, Uganda: The Reverse Linkage project will pool the technical and financial contributions of the partnering institutions with a view to increasing the capacity of IUIU

Libya: state building through SSC in a fragile and conflict-affected context

The BINA initiative is a joint flagship programme run by the Libyan Programme for Reintegration and Development (LPRD), IsDB and SESRIC to support reintegration and the process of state building in Libya through SSC tools such as capacity building, exchange of knowledge and transfer of expertise. The initiative is a remarkable example of addressing the development process of the conflict- and post-conflict-affected countries of the Middle East and North Africa whose limited capacity to articulate development needs into comprehensive SSC initiatives profoundly affects their access to other countries' expertise.

The programme is built on three pillars: research on reintegration, development and state building; capacity building of public administration; and governance and SME development and empowerment.



The BINA initiative is a human development programme that aims to help fragile states to overcome challenges and rebuild human capacity and institutions on the foundations of professionalism, efficiency, transparency and good governance



Libyan foreign ministry employees attended a diplomacy training programme conducted by the Tunisian Diplomatic Institute, Tripoli, Libya



A series of training programmes on public administration and institutional reform was given to employees of the Libyan Audit Bureau, Tripoli, Libya

Within the scope of the BINA Programme, a series of research studies will be conducted by a team of both Turkish and Libyan think tanks and/or research institutes. The research methodology has been designed using the principles and fundamentals of SSC, but mainly through mutual learning in which the overall capacity of Libyan think tanks and/or research institutes, through the engagement of Turkish counterparts, has resulted in a sound and comprehensive policy recommendation and roadmap for Libya.

The SME development and empowerment project aims chiefly at empowering Libyan entrepreneurs, start-ups, and SMEs through facilitating new sustainable business models and growth by providing highly integrated business development services and matchmaking facilities in partnership with the relevant stakeholders in the Turkish business ecosystem. The project seeks to create a model environment in a business incubation and capacity development centre, to be established in Istanbul, where capacity development activities will be carried out for Libyan entre-

preneurs, SMEs, mentors, and business development service providers.

The capacity building project is based on providing training for Libyan government personal and bridging partnerships between Libyan and OIC public institutions for the purpose of benefiting from successful global experiences in public administration and governance development. Training programmes for employees of the Libyan foreign ministry were begun in Tripoli, with the second phase to be implemented in cooperation with the Tunisian Diplomatic Institute and rolled out in Tunisia.

In assessment of all three initiatives launched in collaboration with SESRIC, IsDB and other regional actors, Reverse Linkage has proved to be an outstanding approach within the OIC region, advancing traditional cooperation in support of national capacity development. All complementary programmes, following the economic and operational principles of SSC, contribute to building national and regional capacities for sustainable development.

Enhancing technical cooperation among developing countries

The Turkish Cooperation and Coordination Agency (TIKA)

In light of the new development cooperation architecture, South-South Cooperation (SSC), through its various modalities, is an effective instrument that contributes to the needs of less developed countries in leveraging economic, social and cultural proximities in the spirit of solidarity and equity. Implemented in humanitarian crises, SSC carries a key responsibility to address the most urgent needs in fragile and conflict-affected contexts in line with the Sustainable Development Goals (SDGs), in particular SDG 16 and SDG 17.

The global development cooperation landscape is moving far beyond the donor-recipient paradigm and so the development challenges are becoming more complex. In this respect, SSC brings more inclusive, cost-effective and responsive partnerships and solidarity to developing countries through sharing best practice, know-how and economic transition experience such as technology transfers and financing, as well as peer support, regional, and interregional initiatives for achieving the 2030 Agenda for SDGs.

What South-South Cooperation means to TİKA

For decades, Turkey has pursued SSC modalities in order to enhance technical cooperation among developing countries. Turkey first started to provide technical cooperation and assistance to Afghanistan in the 1920s in the fields of health and education, followed by the first comprehensive programmebased technical cooperation for some Sub-Saharan African countries in the 1980s. Turkey's technical cooperation programme was institutionalised by the establishment of the Turkish Cooperation and Coordination Agency (TİKA) in 1992, commencing in Central Asia, the Caucasus and the Balkans, where Turkey has historical and cultural ties. This trend has been succeeded by a rapid transformation, resulting in a much wider geographical coverage of development partnerships, including countries in the Middle East, Africa, Asia, Pacific and Latin America. TİKA operates through 60 programme coordination offices in 58 countries and implements projects and programmes in more than 150 countries.

TİKA considers the entirety of its development cooperation portfolio as SSC, with the main thematic areas of focus

being education, health, water and sanitation, agriculture, good governance, private sector, energy, media, disaster management, transportation, promotion of cultural heritage, and humanitarian assistance. TİKA's bespoke, human centred, demand-driven approach are the main elements of its success.

Turkey has been supporting SSC dialogues globally, TİKA having hosted the first meeting of the Core Group of Southern Partners in December 2013 in Istanbul. The outcome of the Istanbul meeting prioritised the principles of cooperation in the spirit of solidarity, equality, respect for national sovereignty and non-interference in internal affairs, national ownership, non-conditionality, volunteerism, win-win results, equity and social justice. SSC is thus an effective tool in that it enables:

- The sharing of best practice and expertise in technical cooperation, capacity building and advocacy for sustainable and inclusive joint solutions for the next generation
- The promotion of human development and the capacity of individuals and joint solutions
- Contribution to regional and international development
- The enrichment of bilateral development cooperation with the knowledge and experience of partner countries or of international organizations in forming a common agenda for economic, social and humanitarian development.

The Reverse Linkage project for capacity development at the School of Medicine and Allied Health Sciences, University of The Gambia

Within the framework of a tripartite Memorandum of Understanding (MoU), created to expand cooperation in enhancing socio-economic development in Islamic Development Bank (IsDB) member countries, it was agreed that Turkish expertise and knowledge in various sectors would be made available through Reverse Linkage (RL) methodology. The MoU was signed in 2014 by TİKA; IsDB; and the Statistical, Economic and Social Research and Training Center for Islamic Countries (SESRIC).

The agreement was initiated in response to an official request from the government of The Gambia for capacity development in the Faculty of Medicine and Allied Health Sciences (SMAHS) of the University of The Gambia. A triangular approach was implemented whereby Turkey, as the provider, would share expertise and knowledge through Ankara Yildirim Beyazit University (AYBU) with the University of The Gambia (UTG) as beneficiary. IsDB, as facilitator, co-financed the project with TİKA.

In order to better evaluate the project proposal, a diagnostic mission was conducted in May 2015 to initiate a peer-to-peer consultation process among the technical specialists of AYBU, SMAHS (facilitated by IsDB) and TİKA. The main objectives of the mission were to conduct a study to determine the capacity development needs of SMAHS, identify potential areas of intervention, and propose solutions through the transfer of AYBU's knowledge and expertise. The visit was concluded by the joint formulation of a project plan which was given a thorough assessment by all stakeholders.

A joint mission comprising the stakeholders' representatives then organized a validation visit in August 2015 to fine tune the project design, confirm the financing plan and examine the implementation as well as the disbursement arrangements of the project budget.



Fellow, Omar Jallow, during his studies at the microbiology laboratory, Ankara Yildirim Beyazit University



Project partners in the evaluation meeting at University of The Gambia

Based on the field analysis, three project components emerged as follows:

The first component was skills development for the medical teaching staff. There was a lack of clinical teaching staff in both core and speciality disciplines, so a thorough capacity and skills development programme was implemented in cooperation with AYBU. This has contributed to reducing dependency on SMAHS external lecturers. Other measures are:

- Observership training programme in Turkey
- Short-term training courses in The Gambia
- Master of Science (MSc) scholarships in Turkey
- Study visits to Turkey.

The second component was the upgrading of the medical teaching laboratory and ICT infrastructure, envisioned to improve the practical teaching skills of the medical students. It is intended that computer laboratories of selected locations will be equipped with computers and supplementary equipment as well as intranet/internet infrastructure to establish a reliable platform for internal and external communications for SMAHS medical staff and students. The internet facility will also give students access to online libraries for conducting research. Other measures are the provision of equipment for:

- A clinical skill centre
- A multi-purpose medical teaching laboratory for biomedical sciences
- A teaching laboratory for pathological sciences
- The upgrading of ICT infrastructure.

The third component was the improvement of the conditions of teaching facilities to create a conducive learning environment. Classrooms have been fully equipped with teaching materials such as desks, chairs and white boards for effective



Fellow, Eliman Jobe, during studies at the medical biochemistry department, Ankara Yildirim Beyazit University

training and learning. In addition, a multi-purpose teaching laboratory, micro-biology laboratory, and clinical skills and simulation centre will be renewed and fully equipped along with the offices of the teaching staff.

In December 2017, AYBU conducted two short training courses at the medical faculty at UTG. The first was a one-week intensive course on infection control and quality management, infectious disease, clinical microbiology and public health.

The course was delivered by four academics from AYBU's departments of infectious disease and public health. The aim was to improve the UTG medical faculty's infection control programme through teaching and practice as well as experiencing Turkey's own hospital infection control programme and quality management. The second intensive course ran for two weeks with a focus on surgery, with five academics including a general surgeon, urologist, radiologist, orthopaedics surgeon and an anaesthetist. The aim of the course was to discuss current expertise in The Gambia, introduce new techniques, and plan possible further cooperation. The intensive short-term courses and observations are continuing in 2018.

Further projects

TİKA and IsDB have been applying RL methodology as an effective tool in fostering SSC and strategic partnerships among IsDB member countries through promoting knowledge and experience sharing as well as technology transfer. In particular, TİKA and IsDB have initiated RL projects with Bangladesh on improving cotton varieties, Uganda on vocational training, Pakistan on seismological research, Suriname on capacity development of its civil aviation department and Sudan on developing the capacities of the Africa city of technology.

Successful collaboration between Ankara Yildirim Beyazit University and the University of The Gambia

A total of 25 fellowships have been created over three years through the human capacity development project. In October 2017, five observers from the University of The Gambia's (UTG) medical faculty visited Ankara Yildirim Beyazit University (AYBU) for periods of between two and four weeks:

Eliman Jobe completed his Fellowship in the field of medical biochemistry at AYBU, where he was given the opportunity to study at the Clinical Chemistry University Hospital laboratory, to enhance knowledge of automated stems for use in routine clinical chemistry; immunoassay; point of care; internal and external quality assurance systems; laboratory requests; turnaround procedures and delivery of results to wards and clinics; and integrated laboratory information systems and levels of access.

Dr. Mariam Jaw, fellow at the internal medicine department, studied organization of hospital admission and medical teams; organization and weekly activities of medical/diabetes/endocrine services; organization of dynamic tests and investigations; endocrinology and its relationship to laboratory and imaging services; emer-

gency and intensive care facilities; staffing; equipment; and general organization.

Omar Bojan, fellow in psychiatry nursing at AYBU, was able to gather information on psychiatric services (community and facility based); violent patients, including basic rules, procedures for admission, acute care and discharge; drug abuse, including community prevention and strategies, organization of management and reintegration, and controlled drugs for security/in-patient facilities.

Omar Jallow, fellow in medical microbiology, studied laboratory bio-safety standards and procedures; microbiology training laboratory facilities and management; molecular and cell culture facilities and management, including for medical microbiology; laboratory services for TB diagnosis; and resistance monitoring.

Ngenarr Manka, worked as the Dean's assistant at the AYBU medical faculty. She studied procedures for filing and maintaining security of student academic records and transcripts; and the management of guests, meetings and refreshment. She also provided office assistance to the Rector and Dean of Medicine.

Reverse Linkage between Marmara Research Center, Turkey and Meteorological Department, Pakistan

Zahid Rafi, Project Coordinator, Pakistan Meteorological Department

his reverse linkage project was created for the Pakistan Meteorological Department (PMD), as the recipient and beneficiary, and the Marmara Research Center (MRC), Turkey as the technical support organization with specialised expertise, providing financial assistance to complete the assignments. The project has been designed to enhance the technical skills, performance and capacity of engineers and professionals at PMD's mid level management, through on-the-job training. PMD chose to focus on a seismological study of Pakistan, as two-thirds of the country is located on active seismic faults that are continuously generating earthquakes of varying scale.

PMD has an official mandate for earthquake monitoring as well as a responsibility to distribute earthquake related information to government organizations and to NGOs. It is also responsible for the issue, to relevant organizations, of tsunami early warnings as standard operating procedure. PMD is the only organization in Pakistan monitoring earthquake activity, for which it operates a state-of-the-art digital network for seismic monitoring nationwide, producing ample data for use in research.

The Scientific and Technological Research Council of Turkey (TÜBİTAK) is the country's leading agency for research. It was established in 1963 with a mission to advance science and technology as well as to conduct research and support Turkish researchers. The TÜBİTAK Marmara Research Center was built to run research projects, through its subordinate institutes, in basic and applied science for the requirements of industry, contributing to the increase of the country's global competitive power.

The Reverse Linkage project

Two-thirds of Pakistan is earthquake prone, with more than 500 earthquakes recorded by PMD's national seismic monitoring network annually. The occurrence of major earthquakes, those of more than 6.0 magnitude, is common in the north, north-west, west and south-west of Pakistan.

The world famous Makran subduction zone, situated south of Pakistan in the Arabian Sea, has the potential to generate an earthquake of more than a 7.5 magnitude. The newly built Gwadar sea port, a prime naval base and the national coastal highway are under threat, prompting the study and exploration of the characteristics of the Makran subduction zone. PMD had already completed a seismic hazard study of Pakistan but without an understanding of the crustal structure and the character of the active faults. Such areas of study are helpful for improving hazard and risk assessment, which may reduce economic losses in case of an earthquake disaster in Pakistan and its surroundings.

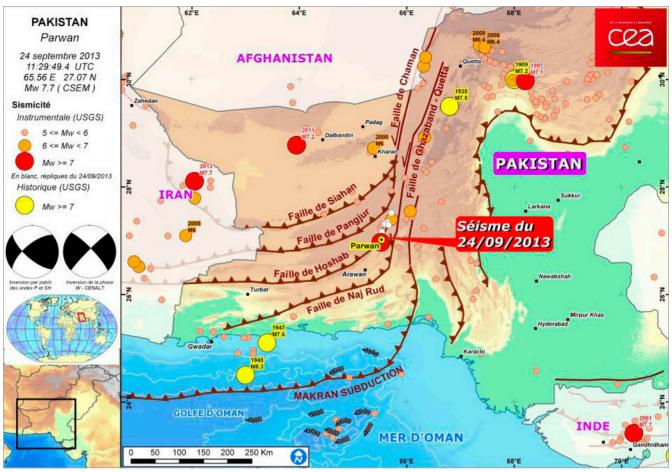
The project of studying earthquakes and tsunamis was given priority due to the loss of life and property incurred in the past. To mitigate the human losses in Pakistan, the Islamic Development Bank (IsDB) has collaborated with the MRC to enhance the capabilities of the PMD in the fields of earthquake, tsunami, and tectonics with focus on the prone areas of the country.

Why south of Pakistan?

The area to the south of Pakistan has experienced many tragic disasters due to major earthquakes. The 23rd most deadly earthquake to date, worldwide, occurred on 31 May 1935, between 2:33 am and 3:40 am, at Quetta, Balochistan where most of the reported casualties occurred. The government estimated that 20,000 people were buried under the rubble. There were 10,000 survivors and 4,000 injured. The city was badly damaged and was immediately sealed under military guard following medical advice.

The second worst Pakistan earthquake disaster occurred in the Arabian Sea at 5:26 PST on 28 November 1945. It had a magnitude of 8.1 and a maximum perceived intensity of X (extreme) on the Mercalli intensity scale, generating a huge tsunami that hit the coast of Makran, causing 4,000 casualties.

Another earthquake hit Balochistan on 23 September 2013. The main shock had a magnitude of 7.7 and a maximum Mercalli intensity of VII (very strong). At least 825 people were killed and hundreds more were injured.



Overview of tectonic fault lines and historical seismic activity in and around Pakistan

Due to the poor road infrastructure in these areas, access is problematic, making it difficult for a survey team to conduct scientific as well as socio-economic surveys.

Under the current project, research will be conducted on the Makran subduction zone, located in the Arabian Sea. Other studies are also planned which will be of benefit to local communities. These are the study of deep crustal structure using receiver function techniques; surface wave dispersion analysis related to tomography studies; estimation and improvement of the velocity model based on PMD seismic data; moment tensor analysis of various large local and regional earthquakes; analysis of strong ground motion data for the safety of building structures, incorporated with risk analysis; field surveys for data collection of various geophysical parameters; a study of the detailed features and characteristics of active faults in Pakistan; and the evaluation of threats and risks to nearby cities.

This project will help PMD professionals as well as scientists to improve the research capacity of PMD's seismic division while working with Turkish scientists under the theme Learning by Working. The Reverse Linkage (RL) method

allows PMD scientists and professionals to request help from Turkish experts in any other related seismic field where topics may become prioritised for mutual understanding.

The main objective is to explore the hazards throughout the south of Pakistan, Balochistan in particular. These are remote areas of the country where no research has yet been conducted. The findings will be useful for the improvement of infrastructure, reducing economic losses as well as danger to life.

Benefits to the community

Earthquake monitoring in the south of Pakistan will be used for the development of earthquake engineering, helpful for the design and rehabilitation of infrastructure. Seismic monitoring programmes for southern Balochistan are designed to improve understanding of the effects of earthquakes due to plate movement. Prior to the project little information on seismic activity and faults has been documented, and few records exist for the areas that have experienced catastrophic damage due to earthquakes. The network that is in the process of being established for the



Aerial view of Awaran after the 2013 earthquake. The disaster compelled the Pakistan Meteorological Department to analyse the country's southern regions

monitoring of seismic activity is expected to provide important deep earth information. Data collection and analysis would contribute to the advancement of earthquake engineering, leading to the development of seismic hazard maps that will be used to design structures with appropriate strength and durability.

Reverse Linkage challenges

RL projects concern technical and financial support from countries rich in knowledge and finance helping countries lacking in both. The RL programme between the MRC and the PMD, and coordinated by IsDB, on seismological research on collected data from Pakistan, began in October 2016 but is facing many challenges during execution.

The main challenge is the involvement of many organizations, each working within its own rules and regulations that create obstructions to project managers and interruptions to the project. The recipient organization has to follow its own country laws, sometimes causing difficulties for project managers.

The donor organization follows its own rules regarding financial matters and the amount of disbursement to the recipient organization such that the purchasing of some items becomes difficult.



A 7.7 magnitude earthquake hit the remote area of Awaran in south west Pakistan in September 2013. The small town, consisting of mud houses, collapsed completely. The earthquake claimed 386 lives, with 816 injuries and 30,000 families affected

Indonesia's contribution to developing South-South and Triangular Cooperation

Directorate for Foreign Policy and International Development Cooperation, BAPPENAS

ndonesia has been a significant partner to the Global South through sustained contribution to development cooperation. Indonesia's involvement in the implementation of South-South and Triangular Cooperation (SSTC) has its basis in the country's constitution. The preamble of the 1945 constitution mandates Indonesia to participate in the establishment of world order based on freedom, peace and social justice. Through its National Medium Term Development Plan (RPJMN) 2015-2019, Indonesia expresses its commitment to continue to improve development cooperation with the Global South. This commitment is explicit in the foreign policy agenda for RPJMN 2015-2019,1 but is hardly a new issue for the government as Indonesia has been showing support to development cooperation among southern countries since 1955 through its organization of the Asia-Africa Conference in Bandung.

The objective of support and cooperation is aimed not only at bridging the interests of fellow southern countries in establishing a more just, equal, and mutually beneficial world order but also to achieve the goals of the national agenda. Indonesia tends to expand its international development cooperation through the ethos of "beyond aid". For years, traditional development cooperation has been centred on the transfer of financial assistance, technology, and solutions from the northern to the southern hemisphere. These activities are not enough to solve the world's problems, especially in the Global South as the situation has become more of a multi-polar order in which there is no one-sizefits-all model for development cooperation. The traditional development cooperation framework cannot touch the fundamental issues occurring in developing countries, which is why Indonesia, along with other Southern countries, is considering the use of a knowledge sharing platform.

Under the knowledge sharing framework, Indonesia attempts to promote cooperation through a Global South peer-to-peer learning system. This activity offers more advantages because knowledge sharing is a platform for mutual learning of certain thematic issues with which both

parties are able to enrich their knowledge to resolve development challenges. One of the modes of knowledge sharing among the Global South is SSTC, a scheme often regarded as the most suitable cooperation model on building capacity between developing countries.

Acknowledging the importance of SSTC, Indonesia has specified five development policy strategies in the RPJMN 2015–2019: policy intervention on the development of SSTC; strengthening institutional capacity and capability in handling SSTC; establishing an eminent person group to assist the national stakeholders of SSTC; promoting SSTC at global and national levels; and developing an incentive mechanism for actors involved in SSTC.

In order to run the strategies, Indonesia engages with international development partners, one of them being the Islamic Development Bank (IsDB). In 2013, the agreement between the government of the Republic of Indonesia (represented by the Ministry of National Development Planning/BAPPENAS) and IsDB was established through a Memorandum of Understanding (MoU) concerning South-South Cooperation (SSC) and Reverse Linkage (RL). Under the MoU, both parties have agreed to implement the RL programme as the main instrument to promote SSC in which IsDB acts as a facilitator in knowledge exchange activities between Indonesia and IsDB's member countries. The area of cooperation is based



Strengthening Indonesia-Suriname development cooperation through Reverse Linkage – opening session at the Ministry of National Development Planning/BAPPENAS, Jakarta, 2017

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Artificial insemination training in Malang, Indonesia, 2015, as part of the Reverse Linkage programme for Kyrgyzstan

on Indonesia's expertise and demand from IsDB's country members. Exploring the opportunities, Indonesia and IsDB identified four areas of cooperation: agriculture; poverty reduction (through community-driven development and other models); governance on fiscal and macroeconomic management issues; and disaster risk management.

Indonesia's resource centres

To further promote the RL programmes, IsDB has facilitated Indonesia's efforts in mapping and collecting resource centres (RCs) to provide capacity development solutions for IsDB country members. The output of this activity was a booklet entitled *Mapping Indonesia's Resource Centres*, in which selected Indonesian RCs have acted as flagship institutions appointed to represent Indonesian expertise in accordance with the development priority area. The selection of RCs was conducted through the following criteria:

- Relevance to Indonesia's SSTC priorities
- Adequacy of human resources (minimum 15 qualified staff)
- Experience in international cooperation, particularly in activities under the auspice of SSTC

• The institution/agency must be established or have been operational for at least five years.

Additional criteria include:

- Relevance to the country's priority areas
- The country's structure of governance, organization and management must support the work of the RC
- Institutions/RCs must show their capability in terms of adequate human resource and infrastructure support
- Institutions/RCs must demonstrate achievement in their areas of competence. This may include innovation and dissemination.

There are 22 RCs shared between 12 development priority areas: agriculture; marine and fisheries; health and population; pharmaceuticals; technical vocational education and training; planning and budgeting; microfinance; transportation; appropriate technology; industry; trade; disaster risk reduction and mitigation. Indonesian RCs are empowered to share development knowledge and experience with other IsDB member countries.

The Reverse Linkage programme in Kyrgyzstan

Three years subsequent to the signing of the MoU, Indonesia ran several cooperation activities under the knowledge sharing framework through the RL programme. One of the best examples is cooperation with Kyrgyzstan regarding artificial insemination for livestock. Themed as "The Reverse Linkage project on the strengthening of the artificial insemination of livestock between Indonesia and Kyrgyzstan," the project aimed to support the improvement effort led by the Kyrgyz Scientific Research Institute of Livestock and Pastures (KSRILP) on increasing productivity in the sector of animal husbandry in Kyrgyzstan.

The cooperation took place in 2015 after an MoU had been signed between the two countries. Indonesia's Singosari National Artificial Insemination Center (SNAIC) was appointed as knowledge service provider to implement the programme. The following year, SNAIC trained at least 86 participants on various artificial insemination sessions and dispatched six experts in three phases to Kyrgyzstan. The cooperation has been mutually beneficial, Kyrgyzstan was assisted in the capacity building event while Indonesia was given the opportunity to promote its expertise on agriculture notably regarding artificial insemination.

Reverse Linkage programme in Suriname

Following the success of the venture in Kyrgyzstan, Indonesia conducted another RL programme on artificial insemination, through its Ministry of National Development Planning (BAPPENAS). The programme, "Strengthening Indonesia–Suriname development cooperation through Reverse Linkage programme: knowledge sharing on agriculture development and artificial insemination for cattle," was conducted via an event in Jakarta and Malang in July 2017. The event was organized to follow the result of a diagnostic mission to Suriname, undertaken by the Indonesian Ministry of Agriculture, which resulted in an agreement that Indonesia would facilitate the opportunity for a representative of Suriname to learn about the development of the Indonesian agriculture sector.

Expertise in artificial insemination has proved to be an effective tool in Indonesia's support of a fellow nation's goal to increase the production of meat, chicken and derivative products. In Suriname, the government needed a nation-wide solution to a deficit in livestock farming, thus artificial insemination became its interest. At the end of knowledge sharing workshop, the Indonesian government offered two components in further development cooperation: expert technical advice in managing cattle for artificial insemi-



Training in cattle feed processing, Malang, East Java, 2015, as part of the Reverse Linkage programme for Kyrgyzstan

nation, plus support for veterinary administration, cattle farm management, and breeding; and cooperation in education between Brawijaya University and Suriname in which Brawijaya University offered the provision of scholarships for five Suriname students.



Reverse Linkage in practice through a workshop on the management of artificial insemination for cattle, Biskek, Kyrgyzstan, 2016

Indonesia and IsDB on future cooperation

Cooperation through RL supported by IsDB has been a considerable success, resulting in gains for Indonesia as well as for the beneficiary countries and IsDB. The BAPPENAS has since gone on to promote development cooperation with Morocco to enhance capability in the formulation and packaging of TT, DT and Td vaccines in support of regional self-reliance, in particular the Sub-Sahara region. The initiative for development cooperation is based on Indonesia's competencies and expertise in vaccine production, acknowledged by many countries in the world.

Given the success of development cooperation, Indonesia has offered to expand the scope of the RL MoU by adding more sectors to the programme, resulting in the following areas of cooperation: agriculture and fisheries; health and population; pharmaceutical; technical vocational education and training; planning and budgeting; microfinance; transportation; appropriate technology, industry, trade; disaster risk reduction and mitigation; and Syari'a financing.

The proposal recognises the importance of RL for Indonesia to achieve the national agenda in developing SSTC while also growing cooperation between developing countries.



Visit to a livestock farm, Malang, East Java, 2017, in a development cooperation programme between Indonesia and Suriname through Reverse Linkage

Expanding Malaysia's development partnership through SSC

Malaysia External Trade Development Corporation and MARDI Corporation

alaysia is a progressive and modern Islamic country with a trade agenda operating as one of the mainstays of its economic development policy in support of the country's transition from an agricultural to a modern, innovative and knowledge-based economy. The economy thrives on open, liberal and business-friendly policies that encourage foreign investment as well as placing trade and investment as one of the important pillars of economic strategy.

Malaysia's foreign trade policy has been built on good and stable relationships with global trading partners, promoting competitive strengths and expertise in many sectors, and working towards achieving mutually beneficial relationships with those partners. Malaysia is the 24th largest trading nation in the world, dealing with over 200 countries, with foreign trade accounting for over 140 per cent of GDP – a main source of the nation's revenue and net income.

One of the key strategies of Malaysia's economic policy is the development of trade as a tool for economic growth in order to ensure the prosperity and sustainable well-being of its people. In undertaking such policies, the country believes in sharing experiences with other nations with the objective of assisting trading partners to achieve economic growth



Suriname officials with MARDI Corporation and IsDB at MARDI's Rice Research and Innovation Centre of Excellence, Penang, Malaysia

themselves and developing long-term relationships through cooperation and collaboration initiatives. This form of collaboration is reflected in Malaysia's efforts to develop stronger linkages with countries in the developing world, one of the initiatives being through a technical partnership programme using trade as a key tool for economic development.

Malaysia's emphasis on expanding relations with foreign countries is demonstrated by leveraging its already developing partnerships through various platforms with a focus on South-South Cooperation (SSC). Malaysia's commitment to SSC has been further strengthened by its signing a Memorandum of Understanding (MoU) with the Islamic Development Bank (IsDB) to provide support and to share experiences in four key areas of development expertise: Reverse Linkage (RL), halal, Islamic finance and resource mobilisation.

While these four areas provide an opportunity for Malaysia to share its development model and success with IsDB members countries, the RL programme is given particular focus due to its scope in using trade as a lever to expand and drive the export of Malaysia's experiences and services in developing technical capacity for IsDB members. Using trade as a development tool provides the catalyst and impetus for countries to grow their economy through the internationalisation of products and services as well as developing sectors that can generate revenue and national income from the global market.

It is for this purpose that the Malaysia External Trade Development Corporation (MATRADE) was selected by the Ministry of Finance as the facilitator for rolling out the items under the MoU with IsDB. MATRADE has gained a number of valuable experiences in developing capacity building programmes for countries in the developing world in collaboration with other international agencies such as Japan International Cooperation Agency (JICA); Vietnam Trade Promotion Agency (VIETRADE); Dubai Export Development Corporation (DEDC); Nigeria Export Promotion Council (NEPC); and IsDB. Examples of successful partnership development programmes are the Malaysia Technical Cooperation Programme (MTCP) and the Third Country Technical Programme (TCTP) for developing countries. Under such programmes, the role of



MATRADE's Third Country Training programme (TCTP), with participants from Botswana, Cameroon, Ethiopia, Senegal and Zimbabwe – a cooperation between Ministry of Foreign Affairs, Malaysia and Japan International Cooperation Agencies (JICA)



A visit arranged by MATRADE to Les' Copaque Production animation and film production company, for TCTP participants to learn about the Malaysian creative industry



The eight MARDI rice varieties maturing at the ADRON research field adaptation trial plot, Nieuw Nickerie, Suriname



Visit by IsDB President, H.E. Dr. Bandar M.H. Hajjar, to MARDI Headquarters, Serdang, Malaysia

trade as a tool for development and economic prosperity was presented through the Malaysian experience, with the roles of the various supporting policies, ministries, agencies and institutions also highlighted. An important aspect of the programme is to inculcate the importance of inter-agency coordination and the creation of an ecosystem that will make a meaningful and positive impact on the communities and the productive sectors of the economy.

Malaysia is keen to enhance its role in the IsDB development partnership initiatives through the RL programme. Through the work of MATRADE and other related agencies, it can contribute effectively in providing workable and holistic solutions to the problems faced by IsDB member countries in the development agendas. One of the main challenges in implementing such trade-related partnership development programmes is the ability to secure sufficient



Top MARDI breeder (in headscarf) explaining land levelling techniques to Suriname officials at MARDI's Rice Research and Innovation Centre of Excellence, Penang, Malaysia

financing to implement projects for the recipient country. As most of the countries receiving assistance have low economic growth, many donors may be reluctant to provide financial aid because of concerns over issues such as governance, lack of project management experience, inconsistent policies and government stability. Many of these projects may not attract the interests of the private sector, as issues of non-payment for services and safety of foreign workers may act as obstacles to public and private sector collaboration. Despite these difficulties, Malaysia, along with other international agencies and IsDB, will work towards finding a win-win solution for all parties as the long-term interests and benefits of partnerships are forecast to outweigh the risks and costs of development projects.

One successful example of a progressive collaboration programme is the ongoing RL project between Suriname



MARDI Corporation officer and Surinamese rice mill operators, Nieuw Nickerie, Suriname

and Malaysia (along with IsDB) in rice production. Suriname is a South American country that is around 18,500km from Malaysia. Nevertheless, both countries have a similar tropical climate, with dry and rainy seasons, although at different times of the year. Suriname's economy relies heavily on exports of minerals such as gold, bauxite and oil, which account for approximately 85 per cent of exports and 27 per cent of government revenues.

However, current account balances have deteriorated sharply in the recent past due to the persistent weakness of commodity prices, gold and bauxite in particular. Suriname's GDP has shrunk from an estimated US\$9,216 billion in 2014 to an estimated US\$8,547 billion in 2016. Because of vulnerability to mineral price volatility, the Suriname Government has decided to consider other, more sustainable industries as engines of growth. One area identified was the agricultural industry, particularly the rice sector due to its being the main agricultural export. When the Suriname Government approached IsDB to seek assistance to improve rice production through the RL platform, IsDB did not hesitate to suggest, through MARDI Corporation, Malaysia as the provider country.

MARDI Corporation is a wholly-owned subsidiary of the Malaysian Agriculture Research and Development Institute (MARDI), and is a leader in agro-technology, with an international reputation for research and development (R&D) supporting agricultural and bio-based industries. The institute has more than 35 years of expertise in rice production and, through MARDI Corporation, has established

partnerships outside Malaysia resulting in extensive international experience of implementing agricultural projects in many countries. By identifying important capacity gaps in Suriname's rice production and value chain, and matching them with available technologies and expertise from Malaysia, MARDI Corporation, together with Suriname's Ministry of Agriculture, Animal Husbandry and Fisheries (LVV), has created a programme to help improve Suriname's rice industry.

The three-year programme will be looking into the main components of rice production – rice variety, soil and water. An important and outstanding aspect of this RL project is



From left; Minister of LVV Suriname, H.E. Soeresh Algoe; Chairman of MCSB, Dato' Dr. Hj. Mohd. Shafei Abdullah; Minister of Finance Suriname and Suriname's IsDB Governor, H.E. Gillmore A. Hoefdraad; and IsDB's Senior Capacity Development Specialist, Aminuddin Mat Ariff; at the signing of the Reverse Linkage project between Suriname and Malaysia for rice production

the sharing of intellectual property rights of Malaysian rice varieties with the Anne van Dijk Rijst Onderzoekscentrum Nickerie (ADRON), a research centre under the purview of LVV tasked to carry out R&D in rice and to provide farmers with the latest technologies and knowledge. Eight varieties of rice produced by MARDI, six high-yielding and two aromatic varieties, will be introduced in Suriname to add value to the existing rice catalogue. These varieties, which will be integrated into the local Surinamese varieties, also contain genes resistant to rice blast (a type of fungus) and brown plant hopper (a type of insect), both significant problems for rice farmers.

The programme will investigate using ADRON in an institutional capacity for certified seed production methodology and protocol as well as setting up a certified seed production facility for the research centre. In the soil component of the programme, a soil fertility map will be generated for the entire 60,000 hectares of rice production area in Suriname so that good fertiliser practices and management systems can then be developed. Another of MARDI's technologies, biofertiliser, will also be tested to see if it can positively help Suriname's rice production performance.

On-farm water management has always been a crucial factor in rice production, and so this RL project will also look into reviewing Suriname's hydrology structure and propose the establishment of an integrated water management system for the rice producing regions. There will also

be a pilot programme in land-levelling on a 500 hectare area to improve water coverage in rice fields.

All of these activities will be supported by a specialised training series for LVV and ADRON officers, and various other local stakeholders including farmers. By the end of the project, a rice policy framework using a value-chain approach and based on findings obtained from the various activities will be presented to the Suriname Government for its consideration.

Ultimately, the Suriname–Malaysia RL project will result in a win-win situation for all parties involved. For Suriname, it will bring about necessary improvements of varieties, infrastructure and human resource development to achieve and maintain Suriname's long-term self-sufficiency in rice production, with an expected increase in per capita rice consumption. The project will help LVV maintain a sustainable and competitive industry, directly benefiting at least 1,500 farmers and indirectly benefiting 5,000 people. The government of Malaysia benefits by showcasing its country's technologies and expertise.

In addition, participation in the project enables Malaysia to share its knowledge and expertise with other IsDB countries – a key part of its Member Country Partnership Strategy. MARDI Corporation will be able to adapt and deploy its technologies overseas under diverse conditions and increased dialogue with various experts will bring new perspectives and ideas. From IsDB's perspective, the project is an efficient and effective way of improving SSC among member countries, helping to realise its vision and 10-Year Strategic Framework.



MARDI Director General, Datuk Dr. Sharif Haron (centre) and Group CEO, MARDI Corporation, Anas Ahmad Nasarudin (second from left) with the Head of ADRON, Nareen Gajadin (second from right) and LVV Coordinator of Western Region, Guido van der Kooye (right)

From a grain of rice — Reverse Linkage between Suriname and Malaysia

MARDI Corporation

Ocean to the north, Guyana to the west, French Guiana to the east, and Brazil to the south. It is half the world away from Malaysia but the greenery, horizons, balmy climate and even the multi-ethnic diaspora bear an uncanny resemblance to those of Malaysia. The country is dominated by the Amazon jungle but its rolling hills and narrow coastal plain with swamps is where most of the people live and where the agricultural land is mainly devoted to rice, the main staple of its population.

In November 2013, the Islamic Development Bank (IsDB) launched an Interim Member Country Partnership Strategy (MCPS) to coincide with the visit of its vice president (operations) to Suriname. As a result, various developmental programmes were put forward to assist in further advancing the country's economic and social well-being. One identified area was the requirement to improve the sustainability of its rice industry.

Rice is Suriname's most important agricultural crop, with the highest share in total value of agricultural production, including cultivated area, contribution to GDP, foreign exchange earnings, and direct employment. As the coun-



MARDI Corporation with His Excellency Soeresh Algoe, Minister of LVV, Suriname, and his staff, together with Aminuddin Mat Ariff, senior capacity development specialist, IsDB, and Ambassador Anwar Lall Mohamed, special advisor to the president of Suriname on development and investment matters, and also Suriname's alternate IsDB governor

try's agro-ecological conditions make it favourable for rice production, around 62,210 ha of land area is dedicated to rice, especially in the northern districts of Nickerie (where 75 per cent of its area reserved for rice), Saramacca (10 per cent), and Coronie (7 per cent). In 2014, annual rice consumption in Suriname amounted to 68 kg per head of population, representing an energy supply of 629 kcals per day and 25 per cent of the total per capita calorie intake. In the same year, the country produced 275,851 t of rice, with around 103,755 t exported to the Caribbean Community (CARICOM), South America, North America and Europe, amounting to US\$55.33 million in transfer incomes. The rice sector in Suriname directly employs approximately 1,500 farmers while giving additional employment to nearly 5,000 people in retail, transport, and service provision.

Despite these statistics, farmers have increasingly been calling for government intervention to restructure the country's rice value chain in order for it to be more sustainable as well as remain competitive in international rice markets. With this in mind, IsDB decided to approach MARDI Corporation (previously Marditech Corporation and MARDI Holdings) with the possibility of contributing its expertise through a Reverse Linkage (RL) programme.

MARDI Corporation is a wholly owned subsidiary of the Malaysian Agriculture Research and Development Institute (MARDI), an agency under Malaysia's Ministry of Agriculture and Agro Based Industry. While MARDI generates inventions and technological innovations to cater for the needs of the agriculture industry, it also creates knowledge bases. This comes through research and development (R&D) activities conducted by more than 500 scientists and spread over various disciplines. To complement efforts to ensure that solutions delivered to the industry are holistic, MARDI Corporation carries out value extraction and upscaling of MARDI's R&D and expertise as well as promotion to stakeholders and clients based on their specific needs and requirements.

MARDI has more than 45 years of experience in rice production, and has been able to create 44 rice varieties. In addition, the institute has produced a manual for rice cultivation and



Malaysian head technical expert for the Reverse Linkage project's first pillar – the introduction of new high yielding and high value rice varieties. Dr. Asfaliza Ramli (left) is seen at work with ADRON staff carrying out tests on the adaptation trial plots on a farm in Nickerie

developed technology packages for various types of rice production. MARDI's know-how has helped Malaysia push its rice yield at the granaries up to an average of 7t/ha, with some areas generating yields of 10t/ha. With these proficiencies and capabilities, MARDI, through MARDI Corporation, has managed to establish partnerships outside Malaysia and generate in-depth international experience in implementing agriculture projects in other countries.

IsDB became acquainted with MARDI Corporation through its works in assisting the Kano State in Nigeria to improve its rice production system, which garnered MARDI the IsDB prize for Science and Technology in 2011. With this recognition, IsDB sees MARDI Corporation as an important partner to further the bank's strategies and interests to serve its member countries in agricultural development.

Inspired by high expectations of its competencies, Mr. Anas Ahmad Nasarudin, Group Chief Executive Officer of

MARDI Corporation, led a group of its experts to Suriname for a diagnostic mission in August 2014, to carry out a rapid appraisal and needs assessment of the country's rice sector. Suriname's rice planting environment is similar to that of Malaysia, consisting of a tropical lowland irrigated ecosystem or a flooded system. As a former Dutch colony, the irrigation and drainage infrastructures in Suriname are understandably well organized and extensive. In addition, due to the small population and hence, limited labour, rice production is fully mechanised, with most farmers owning their own tractors. The Malaysians then saw something that they had not seen before – sowing with the use of aeroplanes – and were impressed with what they found.

Despite Suriname being a net exporter of rice and having nearly 50 years' experience in fully mechanised rice production, based on 2014 statistics, Malaysia has a rice production area of 689,730ha, eleven times larger than Suriname, and



From left: Dr. Ismail Che Haron, Malaysian head technical expert for the project's second pillar – strengthening soil fertility; Guido van der Kooye, LVV Western Region coordinator; Ir. Mohd. Adnan Mohd. Nor, Malaysian head technical expert for the project's third pillar – developing an integrated water management system; and Abdul Rahman Haron, MARDI Corporation's senior technical consultant, visiting one of the main water pump houses in Nickerie

produces 2,645,120t of rice, 9.6 times more than Suriname's output. Furthermore, the average yield of paddy fields in the granary areas of Malaysia is 7t/ha, compared to 4.9t/ha in Suriname, giving Malaysia significant advantage in terms of experience in managing the sustainability of large-scale plantation-based agriculture.

As part of the RL approach, MARDI Corporation was tasked to engage with specific stakeholders in order to understand and acquire detailed information on the gaps between the current and desired conditions. To that end, MARDI Corporation was introduced to the Ministry of Agriculture, Animal Husbandry and Fisheries (LVV), and later the rice research centre under its purview, the Anne van Dijk Rijst Onderzoekscentrum Nickerie (ADRON). ADRON is the

primary agency tasked to facilitate the country's rice sector development, with responsibility not only for R&D but also for directly assisting farmers on the ground. Based on findings by the Malaysian team in coordination with these local partners, it was concluded that, in order for Suriname's rice sector to be sustainable and competitive, it needed to produce high quality rice varieties and increase the paddy yield per hectare from the current 4.9t to 7t. To achieve these objectives, recommendations for improvements were provided to cover the three main requirements of rice production – rice variety, soil and water. As such, the three-year rice production RL project between Suriname and Malaysia is based on three pillars of engagement agreed by all stakeholders; namely, the introduction of new high yielding and high value

rice varieties with disease- and pest-resistant characteristics, the strengthening of soil fertility, and the development of an integrated water management system. The project officially commenced in October 2016 with MARDI Corporation as the provider of expertise and know-how in the field of rice production, ADRON as the main recipient, and IsDB as the connector and facilitator to ensure smooth cooperation between Suriname and Malaysia.

An important aspect of this RL project is the sharing with ADRON of intellectual property rights to Malaysian rice varieties. Eight novel varieties produced by MARDI – six high-yielding and two aromatic -are currently being introduced in Suriname to add value to its existing rice library. Other than providing readily available alternatives, there is the opportunity for them to become the bases from which ADRON can develop new and better rice cultivars. These MARDI rice varieties also contain genes resistant to certain fungi and pests that pose major problems for rice farmers. The genes will be integrated with local Surinamese varieties so that they too will be resistant to these attacks. One of the key limitations for farmers in Suriname is access to certified seed. So, the programme will be looking to develop an institutional capacity for ADRON in certified seed production methodology and protocol as well as setting up a certified seed production facility for the research centre. With this facility, Suriname farmers can be assured of access to high quality, uniform and standard rice seeds based on their respected varieties. Critical knowledge transfer in the areas of certified seed production and breeding will also be provided.

Soil fertility is an important aspect in the increasing of rice production in Suriname. Many areas are currently facing soil fertility degradation due to continuous use of inorganic fertiliser. The strengthening of soil fertility component of this RL project will ensure that soil sampling and fertility mapping of the existing rice production areas are carried out. The map will enable a soil fertility management system to be developed for effective and economical fertiliser usage based on an area's soil type and soil fertility status. The introduction of suitable biofertilisers to increase rice yield while maintaining soil fertility will also be organized. Currently, Suriname does not have the required experts to manage the monitoring of soil fertility, so this component will additionally look into providing the relevant knowledge and expertise to create the necessary pool of talent in this field.

An integrated water management system with good delivery is valuable in making sure that a rice cultivation schedule is met. This is imperative, as optimal rice production is dependent on water resources, delivery systems and cultivation timings. Despite having an established irrigation and drainage system, Suriname does not have a record of

its hydrology capabilities which can be used to maintain an effective and timely water delivery mechanism. As such, the RL project's development of an integrated water management system component will examine on-farm water management so that its use can be optimised at the farmer's level.

A rehabilitation programme will also be developed within the water management component to concentrate on important physical works such as land levelling to optimise on-farm water usage. Due to the continuous double cropping system in Suriname, the final part of land preparation, levelling, is very often not done to the required specifications. This affects water distribution which, in turn, increases the weed population due to parts of the rice field being sporadically unsubmerged. Land levelling improves water coverage and reduces weed problems, resulting in improved uniformity of crop maturity and a reduction in the amount of water required for land preparation and crop establishment. Finally, institutional capacity in irrigation and water resources development is also included in this component to increase knowledge of integrated water management systems in Suriname.

It is important to mention that the most significant impact on the success of this RL project has been Ambassador Anwar Lall Mohamed, special advisor to the president of Suriname on development and investment matters, and Suriname's alternate IsDB governor. His endless advice, guidance and assiduous labour have turned the RL project into a reality. Furthermore, as chairman of the RL project's Joint Coordination Committee (JCC), he will continue to closely monitor every activity and programme to ensure that the delivery of the project outputs and the attainment of its outcomes reach their expected levels.

Another important first for an RL project is the willingness of the Suriname government to undertake a loan from IsDB to finance the project. It reflects the government's belief



Malaysian experts and LVV personnel taking soil samples from a farmer's field in Nickerie

and dedication in ensuring that the country's rice sector strengthens and becomes more sustainable to further help drive the country's development. Indeed, sustainable increase of productivity is paramount for sustainable development. Ultimately, as Brother Aminuddin Mat Ariff, IsDB's senior capacity development specialist, who is also a member of this JCC, succinctly puts it: "IsDB creates a conducive environment to enable member countries to take the lead through a peer-to-peer approach in developing a sustainable capacity development engagement through the RL modality, acting as an effective facilitator and a catalyst to promote the design of a win-win scenario for all stakeholders involved while encouraging private sector participation from inception to drive the collaboration beyond IsDB's RL intervention."

From a grain of rice, the crop grows and multiplies. So does IsDB's RL approach, helping to grow economies, creating new bonds between people from diverse parts of the world and providing new opportunities for farmers.



From left: Aminuddin Mat Ariff, senior capacity development specialist, IsDB; Anas Ahmad Nasarudin, group chief executive officer, MARDI Corporation; His Excellency Soeresh Algoe, minister of LVV, Suriname; Ambassador Anwar Lall Mohamed, special advisor to the president of Suriname on development and investment matters, and also Suriname's alternate IsDB governor

Overall goal: to strengthen the rice industry in Suriname Production of basmathi, pandan Farm productivity improvement Capacity building aromatic rice and variety for brackish water farming Goal: to achieve 8t/ha yield Goal: highly trained staff Goal: commercial production of basmathi, pandan aromatic rice and brackish water farming **Expected outputs Expected outputs Expected outputs** • Commercial production Commercial upscaling • Breeding work to strengthen the Long • Pilot project on suitable variety rice industry • Suitable variety selected Initiate breeding works by the trained staff Repeat varietal trial • Confirmation of results • Training of farmers by staff • Identify promising varieties • Repeat trials • International rice conference for Medium managerial staff • 2nd group of hands-on training, 120 days • Technical visit by managerial staff, · Varietal trial for basmathi, Analysis of results and carrying aromatic rice and brackish water out modifications 2 weeks • Research trials on recommended suitability • Visit by managerial staff to rate Short • Acquisition of selected promising technology and system the programme varieties • Hands-on training programme, • Propose recommended technology and system • Logistic preparation for a varietal 120 days trial via multi-location trials • Logistics preparation • Identify suitable pilot project area • Identify test area for soil fertility Propose training courses for basmathi, aromatic rice and improvement and irrigation and • Selection of staff for different **Immediate** brackish water farming drainage system upgrades levels of training • Technical and financial proposal • Technical and financial proposal Source: MARDI Corporation

Successful partnerships between ATCT and IsDB

Mr Elborni Salhi, Director General, Tunisian Agency for Technical Cooperation (ATCT)

he Tunisian Agency for Technical Cooperation (ATCT) is a non-profit organization, created in 1972 to implement the Tunisian Government policy to facilitate technical cooperation in response to developing countries' needs in different fields and through various modalities such as South-South and Triangular Cooperation.

ATCT's long-standing partnership with the Islamic Development Bank (IsDB) dates back to 1997 when an agreement was signed between the Bank and the Tunisian Government. ATCT has always shown its commitment to IsDB and, in 2015, joined the initiative to implement South-South Cooperation (SSC) projects through the innovation of Reverse linkage (RL). In this way, ATCT is developing its cooperation with the Bank and sister agencies to help IsDB member countries achieve their development goals through providing expertise in priority areas such as project management, financial and administrative control, vocational training and employment, health, education, private sector development, poverty alleviation, agriculture and fisheries, environment and waste water management, standardisation, metrology, and renewable energy.

In 2016, with the support of IsDB, ATCT joined the Joint Partnership Initiative on South-South and Triangular Cooperation for Agricultural Development and Enhanced Food Security, launched initially by UNOSSC and the International Fund for Agricultural Development (IFAD), which aims to identify successful solutions that could be replicated and adopted in the countries of the Arab region, Europe and the CIS region.

A three-year RL project was subsequently launched in May 2017 between ATCT and IsDB to develop the capacity of the Ministry of Education in Chad in the field of Arab language teaching, with technical support from the International Center for Training of Trainers and Educational Innovation (CIFFIP).

Another cooperation project, for the implementation of a mobile payment platform in Mauritania has been developed between IsDB, the Mauritanian Post and the Tunisian Post, to be carried out during the course of 2018.



Post-surgery precinct, Conakry, Guinea

NAB and the alliance for fighting avoidable blindness

Many African countries are lacking in ophthalmologists, infrastructure, and equipment. NAB – an NGO founded by a group of volunteer Tunisian ophthalmologists – has organized large campaigns to promote eye surgery in many African countries. To confront the backlog of cataract operations in Africa, NAB and IsDB began collaborating in 2002 with the first campaign conducted in Niger in March 2003. As a result, 3,394 cataract surgeries were performed between 2003 and 2007.

With the support of NAB, IsDB then decided to create the Alliance for Fighting Avoidable Blindness through eight African countries: Benin, Burkina Faso, Cameroon, Chad, Djibouti, Guinea, Niger and Mali.

The Alliance is a model of South-South trilateral cooperation, involving IsDB, NGOs and ministries of health, focused on cataract surgeries and human resources enhancement. This five-year programme enabled 250,000 consultations and nearly 50,000 cataract surgeries in cities and rural areas.

NAB visited all of the countries, with the teams performing approximately 29,000 cataract surgeries through 80 campaigns.



Second dialogue meeting among IsDB member countries' technical cooperation agencies

Additionally, with the financial support of IsDB, ATCT has dispatched more than 450 doctors and medical technicians to sub-Saharan African countries through various support missions in the fight against blindness. The medical expertise is provided by Nadi Al Bassar, the North African Centre for Sight and Visual Science.

A South-South Cooperation success story

In Tunisia, the fight against cataracts and the prevention of avoidable blindness began in the early 1980s with the support of the government and NAB, an NGO founded by a group of volunteer Tunisian ophthalmologists who launched a series of treatment campaigns to fight against the prevalence of cataracts. The campaign began in Tunisia and later extended to some African countries with high presentations of glaucoma, trachoma and cataracts. The first campaign in Tunisia resulted in an average of 2,000 surgeries per year. The campaign was then exported first to Niger, then to several countries including Chad, Djibouti, Libya, Mali, Mauritania, Palestine, Senegal, South Africa and Sudan. The results achieved between 2003 and 2012 include:

- The sight of 13,000 patients restored
- 44,523 specialised medical consultations performed
- Hundreds of eye care personnel, ophthalmologists and technicians trained
- 500 surgeries organized every week
- 1,000 to 1,500 consultations held every week.



Cataract operation, Ivory Coast



Post-surgery precinct, Mozambique



Inaugural meeting of the Chad Project

Despite the extent of the contribution made by NAB since the start of its campaign in 1980 there has been a lack of ophthalmologists and a shortage of medical equipment. Individual hospitals are equipped to manage no more than ten surgeries each week, therefore a great deal still remains to be done. For that reason, in 2003 NAB formed an alliance with donors including IsDB, ministries of health for IsDB member countries, and NGOs involved in eye care.

Campaign objectives

The main objectives of the NAB campaigns are to:

- Reduce the prevalence of disease by offering high-quality and free medical eye care
- Improve access to eye care by identifying affected populations, reaching the most vulnerable people, and covering remote areas
- Reinforce the exchange of technology and enhance capacity building by supplying medical and ophthalmic equipment taking into account local needs and context, organizing capacity reinforcement projects for local personnel and facilitating workshops on the use of equipment.

Outcomes

This initiative has helped to restore the sight thousands of people. It has also reinforced the capacity of, and training for, local professionals such as ophthalmologists and technicians. It has further provided high quality and free medical eye care such as ophthalmic consultations, vision therapy and the provision of ophthalmic equipment.

Issues and challenges

The NAB campaigns are necessary to reduce avoidable blindness. However, due to the lack of human resources, efforts have not been sufficient to meet the huge demand. The reinforcement of the capacity building of local professionals is crucial for the sustainability of the project. Furthermore, additional backing such as the supply of human resources and medical equipment must be secured for the further

success of this project, and partnerships between the public and private sectors should be strengthened more than ever.

The achievements of the campaigns would not have been possible without the human support from the NAB medical team in addition to the generous contribution of donors.

ATCT's examples of SSC project success Health

- A two-year project to combat maternal and infant mortality in the Province of Kolo, Niger, with the financial support of the French Development Agency. This project included the training of Nigerian physicians by Tunisian experts and the set up of mobile medical units.
- Reproductive health project implemented by Tunisian experts in Niger and funded by the Japanese International Cooperation Agency (JICA).
- Training courses on resistance to HIV, and eye diseases, funded by IsDB.
- A three-year course on infectious diseases, organized in Tunisia for 47 post-doctoral and doctoral level researchers and scientists from various African countries, with the support of JICA.

Education

- Four education counsellors implemented a two-year project to improve the quality of teaching Arabic and French in Niger, with the financial support of IsDB.
- Training courses in communication between languages and in the controversy of communication and international policies in basic education, assessment of teaching achievements and the preparation of textbooks.
- Development of curriculum materials and textbooks in Djibouti by Tunisian experts, funded by IsDB and the French Development Agency.
- Training courses for executives from Arab and African
 French-speaking countries, run within a programme
 supported by the International Organization of La
 Francophonie (OIF), aiming to promote the publication
 and distribution sectors and, in particular, textbooks.
 This enabled some trainees to set up their own business,
 crucial to job creation in developing countries.

Agriculture, water and environment

• Training courses in collaboration with Tunisian institutions such as the Arid Zones Institute (IRA), the Agricultural Research Institute of Tunis (INRAT), Tunis International Center for Environmental Technologies (CITET) and the National Institute of Research in Rural Engineering, Water and Forests (INRGREF), run for the benefit of various African countries in the fields of

installation of windbreaks in arid and semi-arid zones, management of human resources, fight against desertification, environmental protection and climate risks, solid waste management and irrigation, funded by various partners and donors such as IsDB.

- Joint programmes run between ATCT and JICA to identify the needs of those countries particularly in the field of water management.
- A three-year project funded by JICA during which fishery and marine engineering experts assisted capacity building of the Fisheries Training School of Nouadhibou, Mauritania.
- A five-year programme implemented by ATCT, with the support of the National School of Sciences and Sea Technology and JICA to set up an African-Japanese Institute for Ocean Science and Technology (AJIOST).
 This programme aimed at consolidating a network of research labs in sea science in various African countries.
- Five training sessions organized for the benefit of 196 Iraqi executives in wastewater management within the framework of Triangular Cooperation, with JICA.
- 11 courses in water quality control, water management and water meter reading, held in Tunisia for 56 Qatari engineers and technicians.

Vocational training

- A project for Mauritania, funded by the Arab Fund for Economic and Social Development, the Fund for Social Development (FADES/FSD) and the World Bank, involving the dispatch of 32 Tunisian experts to set up vocational training centres in various fields to enable Mauritanian youth to take part in professional life, and provide assistance in building the training capacity of Mauritanian trainers in Tunisia.
- Short- and medium-term technical assistance missions carried out by Tunisians experts in Burkina Faso, Ivory Coast and Senegal to support the vocational training and employment sector in those countries.

Export promotion

- A pilot project in Niger to create a marketing institution to promote agricultural exports, implemented by ATCT, Tunisia Export Center (CEPEX), the Canadian International Development Agency (ACDI) and the Training and Management Company (SOFEG) for Canada.
- Training courses for a number of Arab and African countries on small- and medium-sized business funding, trade, export promotion and privatization techniques, supported financially by IsDB.
- Training of executives from the Gabonese National Investment Promotion Agency (ANPI Gabon) in the field

of development of local and foreign investments in cooperation with Tunisian private and public institutions and the support of the Arab Bank for Economic Development in Africa (BADEA).

Telecommunication

- Technical assistance project funded by FADES and implemented by Tunisian experts to set up public telephone networks in Nouakchott, Mauritania and to train Mauritanian executives in this field.
- Capacity development of Djibouti executives in Tunisian telecommunication institutions.
- Partnership project between the Universal Postal Union and the Tunisian Post Office to set up an online training platform for the benefit of African and Arab countries.

Finance

- Contribution of Tunisian experts to the establishment of the Court of Auditors in Mauritania and the training of 30 Mauritanian judges in Tunisia, with the support of the German international Cooperation Agency (GIZ).
- A five year project in public finance implemented for the benefit of 130 African executives and co-funded by ATCT, the Ministry of Finance, JICA and the African Development Bank.

Promotion of women

 A training programme on Women, Population and Development Promotion, devised for executives from Benin, organized in cooperation with the Center for Research, Studies, Documentation and Information on Women. Study visits were also carried out by approximately 100 officials and executives from African countries.

Fight against poverty

- Establishment of the Solidarity Fund of Mali (EMS) and the Solidarity Bank of Mali (BMS) by Tunisian experts, with the support of Luxembourg.
- Training courses in Tunisia on regional development and decentralization, for African countries and in cooperation with IsDB.

Quality management

A three-year integrated project was carried out to implement an ISO 9001 Quality Management System at the Ministry of Civil Services of the Sultanate of Oman. The project included a training session for 24 Omani executives, three study trips for 14 Omani senior executives and the dispatching of 22 Tunisian experts through nine support missions to the Ministry.

Reverse Linkage Triangular Cooperation between Chad, Tunisia and IsDB for Arab language capacity building

Ali Jarray, Lead Coordinator; Habib Oumar, Local Coordinator; Gali Ngandjei, Assistant Coordinator; Karim Ben Rejeb, Focal Point; Tunisian Agency for Technical Cooperation (ATCT)

s a relatively new capacity building tool, the real impact of RL partnership intervention lies in the opportunities it creates to spread to other sectors and achieve sustainable development objectives in fields beyond the original requirements. As the demand for this approach is rapidly growing, the Islamic Development Bank (IsDB) is exploring new applications of RL partnerships to overcome the challenges of economic development in its member countries.

This Reverse Linkage (RL) partnership takes a very effective economic approach, and has proved an efficient means of capacity building. Thanks to its peer approach, the partnership facilitates the transfer of expertise, technology and necessary resources to the countries that most need it. In addition to the direct benefits offered in building bilingual capacity, this RL partnership has indirect benefits such as strengthening linkages between countries, and sharing experiences, which can open new horizons for cooperation and give rise to new and effective synergies.

Case history

Despite IsDB and Chad signing an agreement in 1998 to improve bilingual education in Chad, the initiative still has a long way to go. Bilingual, specifically Franco-Arab, schools in Chad serve only 5 per cent of the population, and language quality is a concern shared by all stakeholders in the education process. No standardised model for the implementation of bilingual education at school level has been developed. Instead each institution implements bilingual education depending on existing human and material resources.

Also, the Government of Chad lacked a clear strategy for implementing bilingual education, including:

- A definition of the concept and practice of bilingual education
- A high-level coordination mechanism
- The capacity to train bilingual teachers, both initially and continuously

- An evaluation of bilingual teaching and learning to ensure quality
- The development and updating of bilingual teaching curricula
- The implementation of an action plan for the progressive spread of bilingualism.

Reaching above and beyond the financial resources required to improved bilingualism, this project forms part of the IsDB Member Country Policy Strategy (MCPS) 2014–2016. It stems from the framework programme on the generalization of bilingual education in Chad (April 2013) supported by IsDB.

French and Arabic are the two official languages of Chad, and bilingualism is a necessity in the country's education system since the majority of the population use both languages. The introduction of bilingual education is a key factor in combatting exclusion and marginalisation, which are potential incubators of extremism and violence. The overall goal is to consolidate peace and social cohesion through linguistic partnership, cultural harmony and value-based education.

The RL programme will consolidate the latest IsDB activities in the field of bilingual education and include comprehensive capacity development in the Chadian use of Arabic, working within the framework of the Franco-Arab bilingual education policy.

Objectives

The overall objective of the project is to contribute to the improvement of the teaching of the Arabic language, as part of the policy of the Government of Chad aimed at developing Franco-Arab bilingualism. The specific objectives are to:

- Build capacity in the management of national policies and strategies for the development of Franco-Arab bilingualism
- Strengthen capacity in the training of engineering teachers and trainers within bilingual Franco-Arab education
- Strengthen the capacities of translators



The launch seminar held at N'Djamena, Chad, August 2017

Project components

The project is organized around four main components:

Piloting and coordinating bilingualism

- Capacity building of executives in charge of bilingualism in the area of translation
- Study trip for senior officials from the Ministry of National Education and Civic Promotion (MENPC) and Direction Générale Pilotage du Bilinguisme (DGPB) to investigate Tunisia's experience in Franco-Arab bilingualism.

Training and supervision of bilingual teachers

- Faculty capacity building at the level of teacher training institutions at les Écoles Normales d'Instituteurs (ENI) and Centre Pédagogique Régional de l'ISESCO au Tchad (CPRIT)
- Capacity building of the inspectorate and pedagogical advisers at les Écoles Normales Supérieures (ENS)
- Improved trainers' performance in the use of ICT and innovative methods of teaching Arabic.

Design and development of curricula and textbooks

- Engineering curricula
- Engineering textbooks.

Coordination, monitoring and communication

- Annual meetings of the project steering committee
- Coordination and monitoring by project coordinators from Chad and Tunisia
- Follow-up and post-training support
- Launch of project closure
- Capitalising on the tools and reports produced during training workshops.

- Strengthen capacities for the design and development of disciplinary curricula and textbooks for the teaching of engineering at all grades
- Develop ICT skills and innovative methods of bilingual teaching
- Taking into account all steps and actions for the integration of competencies developed through the twentieth century in sustainable development.

Guiding principles

The objectives will be successfully implemented through:

- An approach inspired by the RL partnership method, aiming at the comparing and sharing of efforts
- An adaptation of the tools, approaches and solutions proposed by the Tunisian team to the specificities of Chad and to the available financial resources
- Multiparty financing, including contributions from the Government of Chad, the Tunisian government represented by the Tunisian Agency for Technical Cooperation (ATCT) and IsDB/BADEA.

To achieve the project objectives, the following scheme has been adopted:

- The International Centre for the Training of Trainers and Pedagogical Innovation (CIFFIP), Tunisia, is the provider of expertise and know-how in the field of teaching and learning of the Arabic language, and of bilingualism
- The Ministry of National Education and Civic Promotion (MENPC), Chad is the main beneficiary of the expertise
- The MENPC contributes financially to the project in addition to its support in kind through the facilitation of the logistic arrangement in the country
- IsDB assumes its role as facilitator of project implementation by providing financial support
- ATCT is the donor, contributing financially to the project on behalf of the Tunisian Government.

The project is implemented on the basis of the adaptation of tools, approaches and solutions to the specific needs of Chad as made available by the donors and the financial resources allocated to this project. It is a new opportunity to strengthen IsDB's ongoing and past activities in the area of bilingual education. In total, 133 participants will benefit from 262 days of training and learning, 43 per cent of which will be in Tunisia and 56 per cent in Chad. There will be a further 90 days of tuition and follow-up.

Beneficiaries

 Directors General and Technical Directors of the Ministry of National Education and Civic Promotion





The Directors General of the Ministry of National Education and Civic Promotion, Chad, visiting the National Centre of Technology in Education, Tunisia, November 2017

- · Management staff in charge of bilingualism
- Teachers and trainers of the Arabic language and of subjects taught in Arabic from the institutions in charge of initial and in-service training of primary school teachers – 22 from les Écoles Normales d'Instituteurs (ENI), 4 from les Écoles Normales Supérieures (ENS), ISESCO Regional Pedagogical Centre
- Managers in charge of curricula and textbook design
- Arabic-speaking and bilingual inspectors and educational advisers.

Cost

The overall cost of the project is US\$657,000, financed through donations from IsDB/BADEA US\$277,000; ATCT, Tunisia US\$250,000; and a commitment from Chad of US\$130,000.

Duration

The project will run for 36 months, beginning in May 2017 with the signing of a Memorandum of Understanding. The launch seminar took place in August 2017 in N'Djamena, Chad.

Organizational structure of coordination and management

The coordination and management of the project will be provided by the following structures:

Steering committee

The project coordination and steering committee comprises the Ministry of National Education and Civic Promotion (Chad) and ATCT-CIFFIP (Tunisia). IsDB will attend the steering committee meetings.

Project management cell

An ad-hoc project cell has been planned as follows:

- Chadian party (MENPC), including a national project coordinator and an assistant coordinator as well as an assistant facilitator, responsible for technical and administrative aspects
- Tunisian party, including a senior coordinator in charge of the organisation, planning, coaching, monitoring and evaluation aspects; an ATCT focal point and a CIFFIP focal point.

Success

The first successful activity was the study visit of the six Directors General of the Ministry of National Education and Civic Promotion, Tunis, which took place in November 2017. During this fruitful meeting, the establishment of a plan for the operationalisation of a functional strategy of bilingualism in Chad was completed, with the assistance of a Tunisian expert in bilingualism.

All training modules have been validated by an expert from the Arab Organization for Education Culture and Science (ALESCO). In addition, three broad activities were carried out in early 2018:

- The training in curriculum engineering of inspectors and agents of the National Curriculum Centre (CNC)
- The training in textbook engineering of inspectors and agents of the CNC
- Strategy launch to implement bilingualism in Chad.

Conclusion

This RL project is one of the levers of active SSC initiated by IsDB in its new direction. As bilingual education is one of the priority objectives of the Chadian Government, the project has consolidated its aims, particularly in parallel with the national strategy for the implementation of Arabic-French bilingualism. The project is based mainly on Tunisian competencies, demonstrating capabilities and efficiency in the field of training educators in engineering and in adopting foundation of life skills for sustainable development in general.

For IsDB, this project is an effective model for advancing the principles of SSC among its member countries and for demonstrating its role as a catalyst for exchanges between those countries.

Thirty years of contribution to South-South and Triangular Cooperation from Technical Aid Corps, Nigeria

Dr. Pius O. Osunyikanmi, Director General and Chief Executive Officer, supported by Dr. Yakubu A. Dadu and Adejare O. Mofolasayo, Directorate of Technical Aid Corps (DTAC), Nigeria

he Nigeria Technical Aid Corps (TAC) scheme was established by the Federal Government of Nigeria in 1987 as an alternative to direct financial aid given to African, Caribbean and Pacific (ACP) countries, with the proposition that Nigeria should share its expertise through the deployment of Nigerian professionals to recipient countries based on their assessed and perceived human resource needs. Since its inception, the scheme has continued to serve as an instrument of mutual cooperation and understanding between Nigeria and the recipient countries. As an indigenous development initiative, it continues to impact the sustainable socio-economic development of recipient countries through the recurrent investment of human resources which has also served to enhance South-South Cooperation (SSC).



A TAC volunteer deployed to Jamaica to teach art

The principle has been to promote technical cooperation through the sharing of human resources, experience, knowhow, equality, solidarity, transparency and accountability, without interference in the internal affairs of the recipient countries, as it is demand driven.

Nigeria's active participation in South-South and Triangular Cooperation (SSTC) over the past thirty years is a testament to its commitment towards fulfilling its constitutional mandate which serves as an important medium of foreign policy to promote human capacity development, lasting peace and social justice among the countries of the Global South.

The main objectives of the TAC scheme, which is a foreign policy priority, include the sharing of Nigeria's expertise with other ACP countries, promoting co-operation and understanding between Nigeria and recipient countries, establishing a presence in countries where Nigeria has no diplomatic mission, and facilitating meaningful exchanges in the areas of comparative advantages between Nigeria and the recipient countries.

Main areas of engagement

The TAC scheme has, so far, been dominant in the following areas:

- The health sector medical specialists; general practitioners; pharmacists; nurses and midwives; nurse tutors; laboratory scientists; medical technologists
- The education sector professors; doctorate teachers; special education teachers; psychologists; professionals in science, education and engineering; vocational trainers
- Agriculture and agronomy
- Engineering civil; electrical and electronic; mechanical; hydro; structural
- Law
- Architecture; estate surveying
- Geology
- Artisan production tailoring; dress making; hairdressing; bead making; basket weaving; batik making; auto mechanics; aluminium works; welding; iron-bending.



A TAC volunteer medical doctor on duty in Liberia

The Directorate of Technical Aid Corps (DTAC) and its commitment to South-South Cooperation

Although the initiative is indigenous, Nigeria's TAC scheme came about as a response to the Buenos Aires Declaration on South-South Cooperation in the late 1970s. Since then, Nigeria, through the DTAC, has been actively organising SSC programmes in response to demands from ACP countries in the health, education, legal, science and technology, and agricultural sectors, among others.

While volunteers' positive contributions to the development of recipient countries have helped, in no small measure, to give Nigeria a very positive image in terms of its foreign policy fulfilment, the contributions have, as a consequence, sustained SSC. Since inception, the programme has deployed approximately 6,000 volunteers to 36 countries and is currently operational in 14 countries in the ACP regions, including Benin Republic, Ghana (Forum for Agricultural Research in Africa), Jamaica, Liberia, Namibia, Rwanda, Niger Republic, Sierra Leone, Uganda, Tanzania, The Gambia, Seychelles, St. Kitts and Nevis, and Belize. More states have indicated interest in the scheme, and its utility value is becoming largely known to the world.

In view of the positive strides made by the TAC scheme, a number of regional and international organizations have entered into cooperation agreements with the Directorate.



A TAC volunteer taking class at a school in Liberia

These include the United Nations Volunteer programme; Shelter Afrique (a pan-African finance institution that supports the development of housing in Africa); UNDP; the African Union; and the Islamic Development Bank (IsDB). For the first time ever, a manpower assistance programme run by a developing country is considered a model for expanding the scope of the Commonwealth Manpower Development Assistance Programme.

Achievements of the scheme

Nigeria's TAC scheme prides itself in achieving a great deal in terms of capacity development in the various sectors of deployment, thereby leaving significant legacies in the recipient countries. In Kenya, two medical ex-volunteers who served with Shelter Afrique were retained as directors and were also instrumental in the design and construction of a low-cost housing scheme in Bayelsa State, Nigeria, which was substantially financed by Shelter Afrique. In Uganda, TAC volunteers designed and established the computer science and network system for the Institute of Teacher Education.

In the Commonwealth of Dominica, Nigerian volunteers assisted in evolving a new healthcare delivery system and an ex-volunteer was made the pioneer director of the primary healthcare system. In Zambia, it took the efforts of a TAC volunteer to design a curriculum and initiate a





TAC staff with students of science and English at David Sheehama Secondary School, Outapi Circuit, Omusati Education Region, Namibia

degree-awarding programme in dental surgery at the School of Medicine in 2000 – more than three decades after the establishment of the University of Zambia.

Furthermore, in the Gambia, a TAC volunteer was the pioneer vice-chancellor of the only university in that country, to be succeeded by another TAC volunteer. The first registrar of the university, was a TAC volunteer. Nigerian volunteers headed many departments of the university while a TAC medical team at Sulayman Junkun General Hospital performed the first surgical operation there. A Nigerian TAC volunteer designed a curriculum in tourism for the Milton Margai College of Education in Sierra Leone, and for the course of study in insurance at the Freetown Technical Institute. In Jamaica, a TAC Volunteer drew up a national land surveying plan that was the first of its kind. The same success story applies in Fiji and Seychelles. A Nigerian volunteer also developed banking software for Namibia.

Commitment to the Islamic Development Bank's Reverse Linkage initiative

Nigeria's TAC scheme was conceived as a Reverse Linkage idea by the Nigerian government because of its main thrust toward sustainable development. Once volunteers are deployed to recipient countries, they are expected to carry out their task in the form of train-the-trainer mentorship, enabling local people to take full charge of affairs after the volunteers have departed.

The collaboration between DTAC and IsDB is therefore a welcome initiative. For instance, the two organizations are deciding on the most efficient treatment of obstetrics fistula, evident in The Gambia, Sierra Leone and Somalia. It is hoped that the adoption of the 2017–2020 roadmap for cooperation among the Technical Cooperation Agencies of IsDB



TAC volunteers deployed to Jamaica to teach art, adire and batik making

member countries will provide more partnership opportunities between the two organizations for the benefit of the Organisation for Islamic Cooperation (OIC) member countries as well as enhancing South-South Cooperation.

Conclusion

The programme has exposed Nigerian ex-volunteers to international best practice and knowledge through the sharing of skills, expertise and advanced technology. Ex-volunteers have always returned home with new or improved skills and exposures, which they have put into service in Nigeria. This makes them better equipped to face the new challenges of national development at home.

Nigeria's DTAC is ready to partner with the South-South countries as well as the IsDB-OIC member countries in the various areas of practice.

PICA — a mechanism to share contributions, promote solidarity through development, and foster SSC

Dima AlArqan; Jalal Abukhater, Palestinian International Cooperation Agency

ver the past decade, the Palestinian state has taken major steps towards establishing itself as a member of the international community, worthy of high consideration. Internally, the Palestinians have put together the state institutions and government agencies necessary to comprise the structural core of a contemporary state. In recent years, Palestinian diplomacy has launched a bid to internationalise the State of Palestine, mainly by initiating a bid for statehood at the United Nations and acceding to many international treaties and organizations that define the global political structure.

In 2016, a presidential decree launched a far-reaching public diplomacy tool: The Palestinian International Cooperation Agency (PICA). The establishment of this agency is an expression of gratitude for the international support that the State of Palestine has received throughout the years, and so PICA is creating a new culture of international cooperation in Palestine. It is a state under military occupation, suffering abnormal hardships, relying heavily on international support, yet ambitious and outward looking.

Guided by the concept Solidarity through Development, PICA, with its development partners, seeks to share contributions, transfer knowledge and supply development aid and technical assistance to developing countries with the aim of promoting South-South Cooperation (SSC) through various modalities including Reverse Linkage.

PICA relies on a rich Palestinian know-how, located locally and in the diaspora, to match fellow countries' needs with Palestinian capacities and to implement bilateral, trilateral, and multilateral SSC programmes in the fields of health, agriculture, education, renewable energy, peacebuilding and rule of law, information technology, civic engagement and volunteerism. Palestinian expertise is transferred and employed to the benefit of other countries in need where they provide a huge contribution to SSC.

Since it was established, PICA has led an important role in developing and promoting SSC as a driver to sustainable development and the agenda of 2030. One of the agency's

most important fields of work is health – it sees this field as essential in the raising of developmental standards around the globe in sectors such as medicine, nutrition, first aid, nursing, medical sciences, health management, public health provision and healthcare development.

In August 2017, prompted by an invitation from the Children's Hospital and Institute of Child Health (CHICH) in Lahore, PICA dispatched a team, specialised in children's orthopaedic spinal cord surgery, to Pakistan, led by the head of its orthopaedic surgery programme who had developed a new mechanism in this field. As well as conducting surgeries and sharing expertise with Pakistani medical staff, they led efforts and approached partners to establish paediatric spine services at CHICH, the country's largest children's hospital. On the day of the programme inauguration, the first ever scoliosis surgery took place in a collaborative effort between PICA and the Orthopaedic Association from the South Asian Association for Regional Cooperation (SAARC) countries as well as the Pakistan Orthopaedic Association.

The Palestinian medical team was able to perform posterior instrumentation and fusion surgeries for three patients with adolescent idiopathic scoliosis, a medical condition with no known cause but that causes the spine to curve sideways. The patients' parents, especially their mothers, were very enthusiastic and keen to have the surgery performed for the girls. All three patients had very poor socio-economic backgrounds and therefore were unable to benefit from surgery at private sector hospitals. All patients had uneventful recoveries and were discharged on their fifth day, post-surgery. The Dean of CHICH subsequently announced his willingness to adopt the project and establish a permanent scoliosis service at the hospital. The Palestinian medical team is scheduled to return to Pakistan at least four times per year, to continue the collaborative work on this valuable project.

On the request of the King Faisal Hospital, Kigali, Rwanda, a Palestinian medical team specialising in orthopaedic spinal cord surgery was dispatched in early September 2017 to perform a mission of similar character to that of the Pakistan assignment. The Palestinian medical

team's objectives were to perform several scoliosis surgeries, share technical knowledge in the use of advanced instruments, and conduct specialised lectures and workshops for the hospital's medical staff. To ensure the mission's success, PICA mobilised partners from the private sector in order to donate the required surgical equipment and tools essential for the performance of the orthopaedic spinal cord surgeries. The mission lasted seven days. PICA then made preparations to conduct four similar missions annually in Rwanda to ensure the smooth transfer of medical experience to Rwandan medical staff.

Similarly, an exploratory mission was conducted in Zimbabwe by PICA's head of orthopaedic surgery programme at the request of the Zimbabwean Ministry of Health. While the mission lasted only four days, important meetings were conducted by the team with Zimbabwean officials who all showed strong interest in establishing a children's orthopaedic spinal cord surgery programme in hospitals in the capital, Harare. This form of surgery is inaccessible to many

Zimbabweans and Sub-Saharan countries in general, and so its introduction by the PICA team is considered a significant contribution to the country's health sector. PICA is already committed to conduct a training programme in order to share experiences with medical staff in Zimbabwe to enable their own doctors to perform orthopaedic spinal cord surgeries in the future once all of the skills and equipment are acquired.

Another major area of focus for PICA is the introduction of new technology in agriculture. In August 2017, a special delegation from PICA visited Sri Lanka, on an invitation sent by the Strategic Enterprise Management Agency (SEMA) on behalf of the government of Sri Lanka. The team's work focused on the needs of Sri Lankan farmers in three main areas: water management and irrigation systems; the green houses technique; and ways to decrease the use of chemicals in agriculture. The Palestinian organic agricultural expert, part of the team dispatched by PICA, requested a variety of data on the area and crops, the distribution of organic farms and the current condition of agricultural farming.



A Palestinian agricultural expert analysing the soil as part of the Palestinian agricultural exploratory mission to Sri Lanka, August, 2017



Palestinian medical mission conducting paediatric spinal surgery training for the Rwandan medical team, King Faisal Hospital, Kigali, Rwanda, 2017

Besides meeting officials, the Palestinian delegation conducted a field visit to Dambulla where major problems were noticed in the absence of irrigation systems and the prevalence of poor fertility. Another field visit was conducted to Kantale, Trincomalee District where the Palestinian experts met with representatives from the Sri Lankan government and the farmers' association. After discussion, both sides agreed to run a pilot programme, beginning in the Maha cultivation season, on three, five-acre plots belonging to each farmers' association. The plan for the first year was to learn, develop skills, and introduce new technology and crops.

The mission concluded with multiple agreements on programmes to be implemented. Besides the pilot programme, the parties agreed to launch a five-year project between PICA and SEMA where the shortcomings in the agriculture sector, as observed by delegates, would be addressed. The work has been designed to scale up to countrywide and to include public–private sector partnerships. The PICA delegation expressed its willingness to contribute and share experiences. The project will involve 60 Sri Lankan farmers who will be trained on all aspects, and a farmer exchange programme to be initialised within the first year.

Similarly, an agricultural mission was dispatched to Mauritania by PICA in early 2017. Its purpose was to continue assessing the condition of agriculture in the country in order to formulate a proposal to improve the harvest using new technology and to introduce different methods of agricultural production at national level, using Palestinian know-how and expertise. This, too, is part of PICA's Solidarity Through Development programme, supported heavily by the UNDP and the Islamic Development Bank. A second mission with a specialism in health was able to transfer Palestinian knowledge in the fields of dental, abdominal, orthopaedic, and paediatric surgery over a period of two weeks. A third delegation was made in the field of energy to assess the potential of introducing renewable energy projects in the electricity, irrigation, and water extraction sectors.

In Senegal, PICA is taking steps to launch a three-year educational programme in collaboration with the Senegalese Ministry of Higher Education, interested universities from both countries and relevant partner institutions. The aim is to help develop an educational curriculum in Arabic for the new governmental university in Dakar, teach the curriculum and train local teachers. An exploratory mission was conducted, a joint working plan agreed on, and the technical and educational cooperation programme was launched in November 2017.

At a time where negativity and loss of hope are prevalent, the work of the Palestinian International Cooperation Agency gives many of us hope for a better future. The future of the State of Palestine is being forged by the actions of those who wish to extend a hand to the global community as a sign of friendship and cooperation. Developing communities around the world look towards a brighter future for their peoples and for their children. The shift towards sustainable development and cooperation between the countries of the Global South is of major significance, especially as all cooperating parties realise that a positive outcome will be the result of positive action, working towards a better world for everyone, together.



PICA's head of orthopaedic programme, Dr. Alaa Azmi, diagnosing a Pakistani child with spinal deformity, Lahore hospital, Pakistan, 2017

A contribution to sustainable human development in Africa

Moroccan Agency for International Cooperation; Islamic Development Bank, Rabat Regional Office

is Majesty King Mohammed VI has established South-South Cooperation (SSC) as a strategic pillar of the Kingdom of Morocco's foreign policy. As a priority, a diversified ecosystem to promote SSC in Africa has been developed including ministerial departments, public institutions, government agencies, private companies, banks, insurance companies, foundations, NGOs, universities and think tanks.

The Moroccan Agency for International Cooperation (AMCI) was created in 1986 to reinforce the country's capacity for international cooperation. With its crucial role in implementing Morocco's SSC, the agency's sustainable development brief was to promote human capital and to support and implement human development projects.

Guided by the King's vision, AMCI plays a pivotal role in SSC in support of developing African countries by promoting Moroccan expertise and experience in the field. The agency operates in coordination with the Moroccan Ministry of Foreign Affairs and International Cooperation in implementing the activities that are carried out in partnership with the various Moroccan ministerial departments and national flagship organizations. AMCI's mission is to strengthen cooperation through:

- Cultural and scientific activities such as university and vocational training for foreign students and the exchange of researchers
- Technical cooperation actions such as the organization of short- and medium-term visits for trainees and professionals, and the dispatch of experts for short-, medium- and long-term missions
- Supporting the implementation of sustainable human development projects
- Coordinating the implementation of Morocco's humanitarian actions, along with those of major public state partners, such as donations in the form of drugs, paramedical equipment, foodstuffs, tents and blankets to countries affected by natural disasters.

AMCI operates in 111 countries through four main areas of intervention, with a special focus on Africa where 47 countries

benefit from the agency's activities. Among those activities is the annual delivery of four to five projects in partner countries with focus on sustainable human development in the fields of education; fisheries; health; agriculture and irrigation; drinking water and sanitation; and rural and urban electrification.

Recently, Morocco and The Islamic Development Bank (IsDB) conceived an ongoing project in Djibouti, facilitated through AMCI and the Reproductive Health Centre of Ibn Sina.

Maternal and child health in Djibouti

The challenge

In Djibouti, maternal and neonatal health is considered a public health issue. In its National Action Plan to Fight Maternal Mortality, the country set as its key targets the reduction of the maternal mortality rate to 90 in 100,000 and of the neonatal mortality rate to 25 in 1,000 by 2020. To that end, the Djibouti Ministry of Health's Mother and Child Health Centre is cooperating with various partners to enhance access to maternal healthcare facilities and sensitize the population to the importance of maternal and child healthcare.

One of the main challenges facing the country is the improvement of electronic monitoring systems and the surveillance of high-risk pregnancy and childbirth. This is due to many reasons, including a shortage of the required equipment within maternal and healthcare centres and the non-systematic follow up of protocols and standard operating procedures to properly manage high-risk pregnancies. In addition, staff involved in public reproductive health require an increase in capacity to better manage such situations.

The supply

AMCI has provided the expertise, developed by Morocco's Hospital Ibn Sina and its Reproductive Health Centre (RHC), that has over 25 years of experience in the management of obstetric and neonatal activities, dealing with about 20,000 pregnancy cases annually. Electronic monitoring of high-risk pregnancy and childbirth have taken place at the centre for many years, with a training toolkit having been developed, customized to Moroccan requirements in line with World Health Organization standards.

Achievements

Higher education

25,000 graduates from 47 African countries:

- 13,000 graduates in legal, economic, human and social sciences
- 10,000 engineers, technical specialists and scientists
- 2,000 medical doctors, physicians and health specialists

Technical Cooperation

5,000 African executives in the public sector trained through AMCI training programmes

30+ recipient countries

20+ training programmes available, including: diplomacy, tax customs, energy, electrification, justice, water, management, agriculture, health, infrastructure, climate

Proiect

Assistance devoted to the implementation of 100 projects in sustainable human development with various countries in the fields of education, fisheries, health, agriculture and irrigation, drinking water and sanitation, rural and urban electrification



Trainers' training session held in Morocco, May 2017

The RHC institution is recognised at national and regional levels as a maternal health resource centre. It provides training, including support for other maternal health centres in sub-Saharan Africa, through knowledge exchange. Over 300 training sessions and workshops related to women and infant health have been implemented, with more than 1,500 health specialists from 22 countries, including representatives from Djibouti, benefitting from the training.

Matchmaking

IsDB is in continuous dialogue with the Government of Djibouti and has supported the country's health sector. The Bank is therefore familiar with the country's challenges including the capacity gaps in maternal health.

IsDB has also collaborated with the RHC for many years and has funded various training workshops such that the RHC has been identified as a provider of expertise in the Morocco's Member Country Partnership Strategy. Also, a Memorandum of Understanding between AMCI and IsDB has been signed to facilitate the transfer of Morocco's experience for the benefit of other regions. Thus, IsDB has been able to match the needs of Djibouti using expertise from Morocco.

To close the loop, Morocco, through AMCI, coordinated and funded a peer-to-peer consultation process to design customised solutions to fill the capacity gaps in maternal health in Djibouti. To ensure joint ownership, the governments of both Djibouti and Morocco, through AMCI, contributed to the project's financing together with IsDB.



A visit to the maternity unit at Dar El Hanan, Djibouti to evaluate the trainers' capacity to deliver in-situ training with the coaching of Moroccan experts

The project

Running from 2017 to mid-2019, the project aims to improve the quality of healthcare surveillance for high-risk pregnancy and childbirth. The main activities are:

- Developing a specific set of Training of Trainers (TOT) modules adapted to the local context and providing TOT for Djiboutian maternal health specialists
- Developing the capacity of Djiboutian nurses, midwives and medical doctors in monitoring high-risk pregnancy and childbirth through a series of training workshops
- Formulating and implementing protocols and standard operating procedures for monitoring high-risk pregnancy and childbirth in the Maternal and Healthcare Centres in Djibouti
- Equipping selected maternal and healthcare centres in the country with cardiotocography machines and upgrading the technician's skills in the maintenance of the equipment
- Sensitising decision makers and the public on the importance of electronic monitoring of high-risk pregnancy.

Experts from the RHC, Morocco and the Mother and Child Centre of the Ministry of Health in Djibouti are supervising the project. A joint coordination committee, comprising representatives from these institutions, AMCI and IsDB, meets periodically to review progress.

Wins for all

The development of electronic monitoring of risky pregnancy and childbirth used in the referral maternity cases in Djibouti is in line with the Ministry of Health's strategy. It constitutes a tool for early diagnosis of complications and better management of them, resulting in the reduction of maternal and neonatal mortality. The project will also help to build the capacities of nurses, midwives and medical doctors in various areas, which will be beneficial to the overall maternal and child healthcare capabilities of the country.

By contributing to the project, the Kingdom of Morocco is realising, through AMCI, its SSC strategy – capitalising on its expertise and know-how to help other countries. The RHC will also strengthen its already existing collaboration with the Mother and Child Centre of Djibouti and improve its reputation as a resource centre in maternal health.

From IsDB's perspective, the project is an efficient and effective way of improving SSC among its member countries, helping the bank to realise its vision and 10-Year Strategic Framework.

Reverse Linkage project between Burkina Faso and Morocco for water quality improvement

Sawadogo Moumouni, Water Services Management Specialist and Project Focal Point; Neya Augustin, Environmental Specialist in Water Resources Protection; Yameogo Wendlassida Olivier, Laboratory Water Analysis Specialist, National Office of Water and Sanitation (ONEA)

urkina Faso is a Sahelian country with very limited water resources. With more than 80 per cent of the land located on crystalline basement, groundwater is minimal; therefore the National Office for Water and Sanitation (ONEA) depends on surface water to meet the needs of large and medium-sized cities. In the last few years, the raw water quality has led to a marked increase in eutrophication, where the nutrient enrichment of entropic activity in surface water has led to a proliferation of micro-algae. These organisms lower water quality and contribute to an increase in the cost of potable water production. Other significant consequences include an acceleration in the clogging of the walls and bottom of treatment plants, requiring regular brushing and emptying, and an increase in sedimentary deposits from the dead micro-organisms at the bottom of lakes. The algae also cause the formation of hydrogen sulphide in water, making it more difficult to treat.

It was found necessary to review the entire chain of drinking water production in Burkina Faso to make improvements, for which purpose the ONEA decided to draw on the experience of the National Office of Electricity and Water (ONEE), Morocco.

As a supporter of South-South Cooperation, the Islamic Development Bank (IsDB) has now introduced a scaled-up, result-oriented mechanism, known as Reverse Linkage. The mechanism allows IsDB to facilitate the sharing of knowledge and expertise among member countries. Within this context, IsDB approached the Moroccan Agency for International Cooperation (AMCI) to oversee a tender made by the Kingdom of Morocco to finance the proposed water quality improvement project in Burkina Faso, to be run between the two technical partners, ONEA and ONEE. A Memorandum of Understanding was subsequently signed in January 2015 between IsDB, the Kingdom of Morocco represented by AMCI, and the government of Burkina Faso.

Objectives

The main objective of the project is to improve the quality of water provided by the ONEA, incorporating the process of producing drinking water from freshwater through treatment at station level to the end of the chain, i.e. the customer's tap. The main concern was to improve the quality of the freshwater before treatment, and therefore control cost. An audit of the entire chain was thus required in order to identify the possible points of intervention in the existing system and to review the practices and capacity building of the staff in charge of the activity. The audit defined the project as comprising:

- Protection of water resources: control of eutrophication at the Ziga and Loumbila dams
- Optimisation of water treatment units: Ziga and Paspanga stations, and fresh water from Loumbila
- Upgrading of the central water quality control laboratory for possible accreditation
- Improved monitoring of water quality at the distribution network level.

It was agreed to act on these issues through intervention by Moroccan experts already in Burkina Faso and agent missions from the central laboratory of ONEA, Morocco, in running training sessions and sharing good laboratory practice.

Project implementation

Protection of water resources

With the help of the Moroccan experts, samples of plankton and periphyton were collected in situ and analysed at the laboratory to identify the algal concentration in the dam waters. Measurements of physico-chemical and biological parameters such as pH, T°, dissolved O₂, transparency, turbidity, nitrate, nitrite, phosphorus, and chlorophyll were also taken from the three dams, from the points at which the algae proliferates, to identify sources of pollution. A total of 21 points were identified at Ziga, three in Loumbila, and three at the Mouhoun river. At a site in Salbisgo, two points

Source: Bouloud 2013

Evaluation of physico-chemical constituents of the Ziga and Loumbila dams Ziga dam Surface Nitrates 02 Ortho Cha 270 0.03 < 0.3 7 6 7.5 6.7 460 0.01 < 0.3 560 0.06 6.6 < 0.3 7.8 400 0.01 Depth 10.5m Orthophosphate: hypereutrophic Chlorophyll: ultra oligotrophic Loumbila dam Surface Ortho Cha 0.2m 7.6 7.7 410 0.001 2.7 260 7.7 0.006 2.3 310 0.001 2.4 7.6 7.7 0.000 69 47 360 2.3 Depth 5.5m Orthophosphate: hypereutrophic Chlorophyll: ultra oligotrophic

have been identified during the rainy season and one during the low-flow period.

It was then possible to assess the quality of the raw water using the results of the analyses. It was found that the phosphorus values ranged from 36 to 56mg/l, characteristic of eutrophic lakes. Nitrate values ranged from 0.5 mg/l to 1.6 mg/l, indicating that nitrate-mineralised nitrogen is strongly present in the lake waters, exceeding the tolerable threshold of 0.3 mg/l. These concentrations are indicative of lake water pollution.

Following this operation, it was agreed that samples should be taken at Ziga every two weeks at 17 collection points and every week at four collection points – the water surface, the first and second water intakes and the bottom of the dam. Samples would be taken every month at the other sites. To date, 2,032 samples have been collected and analysed.

The bottom valves at the Ziga and Loumbila dams have now been opened, allowing the collection of accumulated sediments during the rainy season. This has reduced the level of sediment by 40cm, averting the loss of intake. At Ziga, both catches are used alternately depending on the quality of the raw water.

These actions contributed to a considerable reduction in the algal load in Ziga water – from 5 million cells per millilitre of water to 15,600 cells per millilitre during peak algal periods. In addition, two people have been trained in

eutrophication, one on the identification of algal toxins; the other on algal categorisation, and the ability to conduct activities related to the monitoring of raw water quality.

It is now clear that improvements to the ONEA's standards can be achieved through combating eutrophication. The search for solutions has now ventured upstream from the dams, as it is known that there are organisms in the aquatic ecosystem that consume the algal biomass responsible for the degradation of water quality. Among other phytophagous creatures, the silver carp – a predator of harmful algae – has been used extensively in Morocco for this purpose, so it was proposed to carry out a control test with the introduction these fish to restore the equilibrium of the ecosystems. But the researchers and the ministry in charge of fisheries resources objected to the proposal, despite an IsDB-funded mission to share Morocco's experience in the use of silver carp to fight eutrophication.

Optimisation of water treatment units

Following investigations into the raw water, the project's second phase focused on the optimisation of processing units at the Ziga and Paspanga stations. Treatment tests of raw water were carried out in the laboratory to identify malfunctions in the processing and determine appropriate remedial action. The resulting activities managed a reduction in turbidity from 3 or 4 NTU to 1.5 NTU at the station outflow. Also, the pre-chlorination system has been put back into service at the Paspanga and Ziga treatment units and the calc-carbonic equilibrium was corrected through adjusting remineralisation by adding lime to water.

New complementary controls have been introduced at treatment plant laboratories including the measurement of



The Ziga dam, Burkina Faso



Theory training on the use of the spectroscope, from staff of the National Office of Electricity and Water (ONEE), Morocco

organic matter by oxidisability to potassium permanganate and the measurement of iron and manganese by colorimetry.

Investigation into the Ziga treatment plant revealed a failure of the pulsing equipment and a deposition of unextracted sludge during purging. This resulted in arrangements to update the equipment and for the Moroccan experts to train eight personnel including five water treatment agents and three chemists from the central laboratory.

Improvement of water quality monitoring at the distribution system

The improvement of water treatment at the processing station is ineffective if the water quality is not maintained until it reaches the customer. The third project phase was therefor designed to monitor water quality on its entire route through the network. A water safety management plan was put in place in pursuance of recommendations made in the World Health Organisation summary of 2011. The work consisted of investigating water quality monitoring practices at ONEA, developing a plan of action, and making the necessary improvements to achieve good practice throughout. This resulted in training the staff in regulations and strategy as well as defining the necessary steps for monitoring water quality as part of health and safety management.

It was strongly recommended that a team should be established at the central laboratory, dedicated to:

- Monitoring water quality
- Progressively implementing an internal/external communication policy on water safety with interested parties
- Developing awareness-raising programmes on good hygiene practice for staff responsible for managing the personnel involved in the key stages of drinking water production.

Upgrading the central water quality control laboratory

The monitoring and control of water treatment involves the establishment of good practice and the reinforcement of staff capacity and expertise. As an important link in the chain, it was therefore decided that the ONEA central laboratory should be upgraded, with the objective of complying with ISO/IEC standard 17025:2005 to establish general proficiency requirements for conducting tests and analyses.

ISO/IEC 17025 is a tool, guide, and standard that allows information to be structured and controlled, enabling the laboratory to achieve the level of quality necessary to satisfy its customers and to submit to a set of rules which must be ratified regularly by a professional evaluator. Staff training has taken place to ensure that they are committed to the objectives and respectful of the rules and principles of the ISO standard in order to achieve accreditation in the future.

Achievements have so far been made within several physicochemical, microbiological and biological parameters and have provided a model for the methods of analyses in these



Delegates visit a wastewater treatment plant in Rabat

areas. In particular, there has been need to avoid cross-contamination due to incompatible activities caused by the layout of the analysis rooms. The ONEA has made the necessary changes and undertaken to build a more modern laboratory to comply with accreditation requirements.

The second intervention concerned the validation of analysis methods through the integration of a quality assurance approach. To achieve the institutional power to enable the laboratory to secure investments in improvement, there must first be an assurance and consistent credibility to the laboratory's analysis. So, the laboratory has, through this project, followed analytical methods that have been validated such that they are repeatable and reproducible, with tolerable thresholds of uncertainty, to ensure that timely decisions are made, public health problems avoided, and the cost of analysis optimised.

After the establishment of the entire regulatory and quality assurance system, the central laboratory was able to check its own performance by participating in aptitude tests along with other laboratories, organized by the ONEE, on the evaluation of:

Physico-chemical parameters, including pH, conductivity, turbidity, alkalinity, nitrates, nitrite, calcium, magnesium, and total hardness

- Microbiological parameters, including total coliforms, cotolerant coliforms, and E-coli
- Pollution from BOD5 and DCO.

Capacity building of ONEA staff

ONEE officials ensured close supervision of the personnel involved in all stages of water treatment and quality control, sharing their know-how throughout the initiative. The project was conducted in an atmosphere that strengthened collaboration and laid the groundwork that led to the improvement of water quality distributed by the ONEA in Ouagadougou.

Conclusion

The project enabled ONEA to improve its monitoring of the quality of raw water in the Ziga and Loumbila dams and of the treated water. Laboratory practices have been improved and staff are satisfied with their ability to measure water quality and understand risks. The newly established procedures for water catchment and accurate testing have produced very good results. The only difficulty with the project was the failure to obtain authorisation to import silver carp for control against the consequences of eutrophication.

The Egyptian Agency of Partnership for Development — forging partnerships to provide regional solutions with a global perspective

Ambassador Dr. Hazem Fahmy, Secretary General, The Egyptian Agency of Partnership for Development

stablishing partnerships is an attitude and a state of mind". This is how one of the partners of the Egyptian Agency of Partnership for Development (EAPD)¹ recently described what the organization strives to do every day. It also sums up the ethos of the EAPD's work, as it has learnt that sharing experiences, know-how, best practice, lessons-learnt, capabilities, resources and connections is the best way to devise and provide creative solutions to communities and countries of the Global South in a way that maximises impact and adds value.

The communities and countries that the EAPD aims to support in their developmental efforts are in Africa and the Islamic world. Since its creation by H.E. President Abdel-Fattah El-Sisi in July 2014, as the South-South Cooperation arm of the Egyptian Ministry of Foreign Affairs, the agency

has been building innovative partnerships at national, regional and international levels to more swiftly and effectively bolster the endeavours of African and Islamic communities and countries to achieve the Sustainable Development Goals (SDGs), and unlock and harness the immense potential they possess. Although the EAPD was established by the merging of two Egyptian Funds for Technical Cooperation, one with Africa and the other with the Commonwealth of Independent States, and its work builds on their accomplishments, the agency's capabilities, resources, and more importantly ambitions, are far greater than the sum of its parts.

The Islamic Development Bank (IsDB) is one of the longstanding and valuable partners of the EAPD. The scope of cooperation has widened to include the various entities within the IsDB Group, and has taken many forms, most



A group of African brothers and sisters at the conclusion of a training programme held in Cairo in cooperation between the EAPD and the Egyptian International Center for Agriculture



H.E. the Egyptian President Abdel Fatah El-Sisi meeting with the editors-in-chief of the most important English and French newspapers in Africa at the end of a visit to Egypt organised by the EAPD

recently focusing on jointly organizing capacity building programmes for African officials and providing experts in the vital fields of health, education, infrastructure, agriculture and irrigation. These activities have enabled the precious transfer of knowledge to sometimes isolated communities, thereby providing them with the means to kick-start their sustainable development process.

In the area of health, one of the IsDB initiatives in which the EAPD is particularly proud of taking part is the Alliance to Fight Avoidable Blindness, because it resonates with a strong belief that better health is central to human well-being and development in all of its dimensions. Through a 20-minute surgery, a blind or near-blind person is able to see again or avoid blindness. This is incredible and life changing, yet simple and achievable. The partnership aims to help some of the 40 million people suffering from avoidable blindness to properly see again. It is also currently working to launch several campaigns in a number of African countries over five years. Chad will be the first, with 500 cataract and glaucoma surgical operations planned there, as well as the provision of medical equipment to Chadian hospitals.

Other EAPD-IsDB collaboration projects are in the pipeline. The philosophy behind them is to pull together resources and expertise to multiply the benefits of intervention. For example, capacity building programmes are being planned in urology and nephrology diseases for African countries that are members of the Organization of Islamic Cooperation (OIC), in partnership with the Mohamed Ghoneim Urology and Nephrology Mansoura Center, an Egyptian centre of excellence in medicine. Under this initiative, an intensive training programme for urologists from the Mulago Hospital in Uganda is being organized at the Mansoura Center, the first step towards establishing a centre for urology and nephrology in the Ugandan hospital. The long-term aim is to gradually expand the programme to create a regional centre serving communities across East Africa. The aim is ambitious, but the African saying: "if you wish to move mountains tomorrow, you must start by lifting stones today", is apt.

Since its inception, the EAPD has sought to capitalise on Egypt's comparative advantage in medical competence by engaging with national centres of excellence that are of international standing in various medical fields. Partnerships were quickly forged because all parties involved saw the potential benefits to human development. These South-South Cooperation partnerships have proven to be successful, making a high impact on many lives in African countries.

In addition to the urology and nephrology Mansoura Center, where a number of training programmes are being developed, the EAPD is honoured to be partnering with the Magdy Yacoub Heart Foundation (MYF). Headed by the world-renowned Egyptian heart surgeon Sir Magdy Yacoub, the foundation offers state-of-the-art free health services to the less privileged, and at international standards, mainly through its Aswan Heart Centre. The EAPD has been working closely with the foundation to develop African expertise in cardiovascular diseases. This partnership has taken many forms, all with positive results. Promising African surgeons are receiving extended periods of free training in the Aswan Center. Once they return home, they are not only able to perform complex heart interventions,

but also pass on the knowledge they acquire in Egypt to fellow doctors.

Most recently, in July 2017, the EAPD joined hands with the MYF to organize and sponsor a visit to Ethiopia by a medical team of 27, including surgeons, doctors and nurses from the foundation. Headed by Sir Yacoub himself, they performed, for free, 45 delicate heart operations on a number of underprivileged Ethiopian citizens at the Black Lion hospital. This is the fourth visit of its kind since the EAPD-MYF partnership was launched. In 2016, through this partnership, an Egyptian wing at the Cardiac Centre of the Ethiopian hospital was established and equipped with an advanced cardiac catheter and other medical devices.

Another example of a successful initiative on which EAPD and MYF have collaborated is the holding of the International Conference on Rheumatic Heart Disease, Cairo, in January 2017. Organized in partnership with the Pan African Society for Cardiology, its goal was to explore the various dimensions of the disease. African participation was crucial, given the high prevalence of the disease on the continent and the little research conducted on it in The West. Like avoidable blindness, it is preventable and curable but unnecessarily harms and kills people across Africa. Over one million children are estimated to suffer from the disease in Sub-Saharan Africa alone. The EAPD enabled 100

young African cardiologists, who showed great potential, to participate in this important learning event by covering all travel and accommodation expenses. Their presence and interventions was a source of pride to the EAPD, given their talent, hope and eagerness to learn.

Another success story is the EAPD's partnership with the Children's Cancer Hospital Egypt (57357), the only specialised children's cancer hospital in the Middle East and Africa and the largest of its kind in the world. Here, a capacity building programme is being implemented, aiming at training 600 African medical practitioners and providing expertise and equipment to hospitals in African cities. The hospital is currently offering expertise to The Sudan in the establishment of the Sudanese Children's Cancer Hospital (7979). It is also taking charge of the free treatment of a number of African children suffering from cancer, for instance a child of four who was flown to the hospital with severe leukaemia and minimal chances of survival. The child, Manzy, received expert medical care and an incredible amount of love, and is now able to play like any other child. This is just one story of how these partnerships are able to change lives. One could recount a hundred more.

These examples prove that in the Global South, we can, and do, help one another to achieve sustainable development through the sharing of knowledge and resources. While



Sir Magdy Yacoub, Ambassador Dr. Hazem Fahmy, Ambassador Abu Bakr Hefny and a team of Egyptian and Ethiopian doctors at the inauguration of the Egyptian wing at the Cardiac Centre in the Black Lion Hospital in Addis Ababa, Ethiopia



A young Ethiopian doctor sponsored by the EAPD being trained at the hands of an Egyptian surgeon at the Magdy Yacoub Foundation Heart Center in Aswan, Egypt

EAPD's partnerships with NGOs in the health sector are a case in point, there are other successful models of South-South Cooperation in other vital areas.

Since its creation, the EAPD has been keen to support, through partnerships, the efforts of African and Islamic countries to achieve the SDGs, and not just SDG 3 related to the promotion of healthy lives. Achieving gender equality and empowering women – SDG 5 – is also very high on the agenda because development cannot be achieved or sustained without the full involvement of women. As such, the EAPD collaborates with the Egyptian National Council for Women to design and deliver training courses tailored to women from the continent on various issues. Programmes such as The Empowerment of African Rural Women through Micro-Credit, and Fighting Terrorism for African Women Judges, have been very successful.

Agriculture is another priority area of focus for the EAPD. Egypt is rich in expertise in this field, and SDG 2 – on ending hunger, achieving food security and promoting sustainable agriculture – is of crucial importance to the region. The Egyptian International Center for Agriculture has been a trusted and reliable EAPD partner and, through this collaboration, many capacity building programmes have been designed and delivered, including Irrigation Techniques for Water Conservation and Small Scale Fresh Water Management, to name but two.

Development and security are closely interlinked. This is why EAPD is collaborating with national partners to support other African countries in implementing SDG 16 related to the promotion of just, peaceful and inclusive socie-

ties. Through solid partnerships with the Ministry of Justice, the Administrative Control Authority, the Armed Forces and the Police Academy, many officials from the continent are receiving training programmes on issues such as human trafficking, anti-terrorism measures and humanitarian law.

Although the EAPD is a government agency, it is a staunch advocate of the private sector's role as a vehicle for development, and supports its efforts to intensify African trade and investment. Partnership models have also been jointly designed, yielding very positive results. The programmes being implemented with the International Business Driving License (IBDL) Foundation in Egypt fall under one of the most successful of these Public-Private Partnerships. For example, 1,000 business scholarships are being offered, focusing on honing the managerial and entrepreneurial skills of young talents from government, companies and start-ups in 20 African countries. The aim is to help shape a generation of young Africans who are able to confront current challenges in preparation for future leadership. A special capacity building programme in Egypt has also been put in place for 100 African diplomats, entitled The Role of Diplomats in the 21st Century. Egyptian experts led the training, and participants left Cairo better equipped to design and implement strategic plans for more effective investment and trade policies in their countries.

The organization of the investment forum, Africa 2016, held in Sharm El-Sheikh, February 2016 – the first of its kind to be held in Africa, by Africa and for Africa – was the fruit of yet another successful partnership led by the EAPD and involving various entities from government and the private sector. Inaugurated by the Egyptian president and attended by leaders from Africa and beyond, the forum witnessed in-depth discussions on how to best utilise Africa's economic boom to enhance its standing in the global economy and improve the lives of its people. It has now become an annual gathering, a testament to its far reaching impact.

The realm of EAPD activities is broad.² In addition to the training programmes organized for over 7,000 participants from 42 countries in Africa and the Islamic world and the 65 experts dispatched to transfer knowledge in 21 countries, mainly in Sub-Saharan Africa, the agency also provides emergency aid and humanitarian assistance to countries in need.

The examples given above focus on some of the successful partnerships initiated by the EAPD over the past three years. The hope is to inspire others to reach out to partners at various levels, and from different affiliations, as these experiences have demonstrated that forging South-South Cooperation partnerships is the best way of achieving Development through Sharing.

JICA's contribution to South-South and Triangular Cooperation

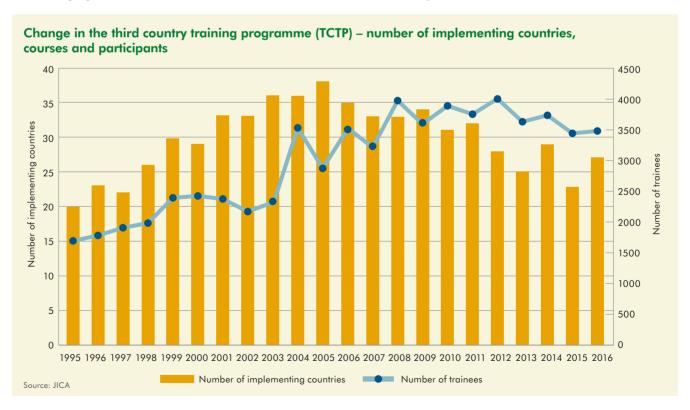
Chie Miyahara, Senior Deputy Director General, Middle East and Europe Department, JICA; Mitsuhiro OSAKI, Senior Deputy Director, Middle East Division 2, Middle East and Europe Department, JICA; Kenta Ono, Deputy Director, Middle East Division 1, Middle East and Europe Department, JICA; Akitoshi Iio, Project Formulation Advisor for Jordan and Iraq, JICA Jordan Office

In 1954, Japan launched its technical assistance activities by joining the Colombo Plan, while the country was still undergoing postwar reconstruction and receiving financial assistance from other donor countries and institutions. As such, Japan was a centre of South-South Cooperation (SSC) between itself and neighbouring countries. Since then, the Japanese government has expanded the volume of SSC and its sectoral coverage through the Japan International Cooperation Agency (JICA), the country's Official Development Assistance (ODA) wing.

Japan's Development Cooperation Charter, revised in 2015, also stresses the importance of partnership, particularly with emerging countries and other donors and actors. The

emphasis on partnership reflects the importance of not only SSC, but also Triangular Cooperation, as essential tools for Japan's ODA. The charter reads: In implementing development cooperation, it is also important to take advantage of expertise, human resources and their networks, and other assets that have been accumulated in the recipient countries during the many years of Japan's development cooperation. Japan's Triangular Cooperation, involving emerging and other countries, capitalises on such assets. In view of the high regard held by the international community, Japan will continue to promote Triangular Cooperation.

Based on the charter, JICA has been implementing a number of SSC and Triangular Cooperation projects. These forms of cooperation are considered effective in: disseminat-





Training in rice cultivation techniques, targeting Africa

ing the details of successful efforts, including those achieved through Japan's cooperation; contributing to the promotion of regional and global cooperation; and complementing and supplementing bilateral cooperation bolstered by the knowledge and experience of developing countries.

In recognition of these effects, JICA supports the dispatch of experts from one country to another and the hosting of trainees in a third country, an exchange known as the third country training programme (TCTP). In recent decades, JICA has consistently received approximately 3,500 trainees per year under TCTP.

JICA also believes that SSC can help developing countries to mutually deepen their relationships and achieve their development agenda. The agency is collaborating widely in Triangular Cooperation through which developed countries, developing countries, and international institutions work together with unified goals. This framework for partnerships is actively adopted worldwide, including in the Middle East and North Africa (MENA) region. JICA runs the partnership programme (PP) for SSC and Triangular

Cooperation with 12 countries, including Egypt, Tunisia, Jordan, Malaysia, and Indonesia. Even outside the PP framework, JICA conducts TCTPs with countries such as Turkey, Morocco, and Iran.

In the MENA region, JICA focuses on two priority areas in Triangular Cooperation - fostering partnerships in the region and neighbouring regions; and supporting efforts made toward peace and stability in conflict-affected areas. Since 2007, JICA has supported training programmes for 13,461 officials in the MENA region alone, as implementing countries. More than half of the programme trainees have come from the region, with 25 per cent from Africa and the rest from other regions such as South Asia (including Afghanistan) and Europe (the Balkans). Jordan has received the largest number of trainees from neighbouring countries, mostly from Palestine and Iraq. Egypt has received the second largest number, of whom one-third has come from MENA and two-thirds from Africa. Meanwhile, Morocco and Tunisia invite participants mainly from Africa. Turkey's programme focuses on the Balkan and Central Asia regions,

while Iran's training programme is organized solely for Afghan officials.

A positive aspect of the TCTP conducted within the MENA region is the scope of languages in which the training programmes are provided – Arabic, French, and Persian. Most of the lectures in the regular programmes carried out in Japan are presented in either Japanese, with English interpretation, or in English. This approach may impede broader participation, as the candidate trainees must necessarily have a good command of English. In addition, the technologies and capacity levels required are quite similar within the region, which makes it easier for trainees to apply the technologies or ideas to their everyday work.

Inter-regional cooperation initiatives such as TCTP for Africa have been encompassed in the Tokyo International Conference on African Development (TICAD) process. The Japanese government collaborated with the United Nations and Global Coalition for Africa (GCA) to hold the first TICAD conference in Tokyo in 1993 in which the co-organizers vowed to reverse the declining trend of development assistance to Africa following the end of the Cold War. The declaration listed regional cooperation, regional integration, and a harnessing of the Asian experience for the benefit of African development among TICAD commitments for the coming years. Following this initiative, the Japanese government strengthened SSC both within the African continent and with neighbouring regions.

In 2013, the Yokohama Declaration adopted in TICAD V held in Yokohama, Japan emphasised the achievements of the TICAD process over last 20 years, including regional cooperation. The declaration states that: The TICAD process has enhanced the level of cooperation between many Asian

Change in the number of participants through TCTP with respect to each implementing country 900 800 Number of participants 700 600 500 400 300 200 100 0 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 **—** Jordan Syria Algeria Morocco Tunisia - Turkey Lebanon

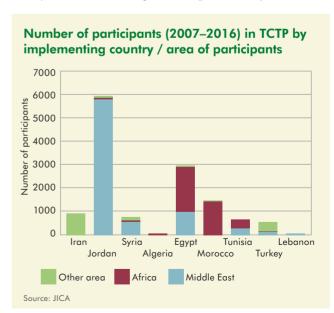
and African countries and has enabled the Asian development experience to be shared with, and where practicable, adapted to, African realities. Also notable is that TICAD has effectively promoted and supported South-South and Triangular Cooperation, including intra-Africa cooperation, as distinctive forms of partnership.

One of the unique aspects of the TCTP is a system that allows an ex-trainee who has taken part in a JICA-sponsored TCTP course to submit a request for follow-up support from JICA. More specifically, if a trainee would like to conduct a seminar for any related subject and invite a lecturer from Japan or the third country, JICA can financially support the activity after screening the proposal. A trainee can also apply to JICA for the provision of small-scale equipment that can be expected to bring about a more effective output from the training. This kind of follow-up scheme helps trainees realise the widest possible impacts from the courses when they return to their respective countries.

Case 1 – Conference on Cooperation among East Asian countries for Palestinian Development (CEAPAD)

CEAPAD is a framework initiated by the Japanese government to discuss ways in which East Asian countries can use their resources, knowledge, and experiences to support Palestine's nation-building efforts. Japan, Palestine, Brunei, Indonesia, Korea, Malaysia, Singapore, Thailand, Vietnam, the Islamic Development Bank (IsDB), the League of Arab States, the World Bank, and the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) participated in the first conference held in Tokyo in 2013.

Since CEAPAD's launch, approximately 350 Palestinians have joined the training courses provided by East Asian





Experts from Indonesian NGO, IBEKA, conduct a field survey on water facilities in the West Bank of Palestine under the CEAFAM scheme, supported by JICA and IsDB

countries such as Malaysia, Indonesia and Thailand. The courses cover various sectors such as Islamic finance, small and medium size enterprise development, agriculture, tourism development and other crucial and promising sectors for Palestine's economic and social development. Besides training, JICA also supports the dispatch of experts from East Asian countries to Palestine, another activity highly welcomed by both sides.

The CEAPAD facilitation mechanism (CEAFAM) aims at the expansion of financial and technical partnerships for Palestine in cooperation with IsDB. Two projects have been financed through CEAFAM. The first, a project proposed by the Indonesian, not-for-profit People Centred Business and Economic Institute (IBEKA), has successfully organized a workshop in Jordan and dispatched Indonesian experts to Palestine. Palestinian participants in the workshop have

subsequently identified community participatory development needs in sustainable energy and poverty reduction sectors in the West Bank. The second, a project proposed by Wafaa International Group, an Indonesian NPO, has successfully established a cloud fund portal for Palestinians.

JICA plays a vital role in maximising the impact of CEAPAD and CEAFAM. On top of the financial contributions it provides for training programmes, JICA extends technical support to the Ministry of Finance and Planning of the Palestinian Authority in finding Palestinian needs and matching them with resources in East Asian countries.

CEAPAD and CEAFAM are both overwhelmingly important and show strong promise as emblems of the commitment and intentions of the international community in supporting Palestinian efforts to establish a viable and prosperous independent state.

Case 2 - Egypt

Egypt, a major power in the Middle East and Africa, plays an important role in regional peace and stability. In cooperation with Egypt, JICA has provided technical and financial support to countries of the region since 1985, efficiently and effectively improving the capacity of those countries based on their similarities, and strengthening regional cooperation. More than 20 training programmes are conducted every year for African and Middle Eastern countries to address the needs of each region.

As an example of a programme for Africa, JICA and Egypt have been collaboratively providing training programmes with the aim of using advanced cultivation technologies to support the efforts of African countries to double rice production, an initiative announced in the TICAD framework. The background of Egypt's advanced technologies has roots in

Japanese cooperation activities from the 1980s. Technologies transferred through JICA's technical cooperation and facilities constructed through grant aid are being used in the current training programmes. One participant has commented: "Training is a unique opportunity to learn new technologies. After the programme, I shared the technologies learned with farmers in my country. As a result, we were able to increase the volume of rice production in our region by 25 per cent."

JICA and Egypt also conduct training programmes for Middle Eastern countries in the areas of health, water resources, tourism, electricity, and trade relations. The programmes range widely from multi-country initiatives in the region to programmes in individual countries such as Iraq, Palestine, and Yemen. Egypt's geographic proximity and common linguistic heritage contributes to both the efficiency and effectiveness of the initiatives.



Seminar on hospital infection control, targeting the Middle East





The Counter Improvised Explosive Devices, Training of Trainers course. A trainee member of a bomb disposal squad in a special protection suit handled a suspected explosive device, a suitcase, found at a petrol station (top). A remote x-ray scan of the suitcase (above) detected a detonation device with battery. The suitcase and contents were then destroyed remotely with a disposal gun (right)

Case 3 – Jordan: capacity building and technical skill improvement for public security in Iraq

From 2005 onward, JICA has conducted TCTP in Jordan to assist the public security sector of the Iraqi Government, as well as the Kurdish Regional Government, in cooperation with the Public Security Directorate under the Ministry of Interior of Jordan. The training programme, now in its second phase, focuses on capacity building and technical skill improvement for public security. Specifically, it aims at enabling the Iraqi government to protect security and stability in Iraq. Enhancements in the capacity of the Ministry of Interior of Iraq (MOI) and Kurdistan Regional Ministry of Interior (KMOI) are expected, as is the success of both qualified experts and functional agencies in tackling the various forms of crime and terrorism occurring in the country.

17 courses were scheduled under the programme in 2017, attended by approximately 140 participants from the Iraqi public security sector. The courses cover themes such as investigation, analysis/testing, and disposal in the public security area, and explore such topics as forensic evidence, counter terrorism, cyber crime, the training of police dogs, domestic violence, improvised explosive devices, post blast investigation, and explosive residues. The courses are designed in coordination with the host agency in Jordan, the appropriate Iraqi ministries, and JICA.

One of the courses – Counter Improvised Explosive Devices, Training of Trainers – was recently completed under the tuition of Jordan's Public Security Directorate Explosive Handling Unit, from which Iraqi officials gained practical knowledge and effective resources, being equipped with the same devices as used in the training immediately after they returned to Iraq.



The role of SSC in capacity development programmes in Africa — understanding the importance of mapping resource centres

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frica is at a critical juncture in its development trajectory, marked by the advent of Africa's development blueprint, Agenda 2063, and the Sustainable Development Goals (SDGs), both calling for a focus on domestic resources to finance development agendas. In the past two decades, the "Africa Rising" narrative elevated hopes and expectations as to the possibility, and the capacity, of Africa to finance its own development. Although the majority of non-commodity exporting African countries still maintained positive growth performance, there has been a recent deterioration in Africa's average economic growth due mainly to lower commodity prices – 3.9 per cent in 2013; 3.7 per cent in 2014; 3.4 per cent in 2015 and 2.2 per cent in 2016.

The inability of African countries to sustain their high growth performance is intrinsically linked to inadequate implementation capacity caused by systemic weaknesses at continental, regional, and state levels, as well as institutional and individual levels.



Capacity development is complex and requires the careful nurturing inherent in long-term partnerships and patient investment

At continental level, capacity development challenges are related to the inability of the African Union and its organs to adequately coordinate the continental development agenda, successfully engage internal and external actors, and mobilise enough resources for its implementation. At regional level, the key capacity issue is that the regional bodies are failing – or taking a longer time – to play their role as building blocks of the continental development architecture. At national level, the main capacity challenges include the inability to align national development plans to continental and global agendas while successfully implementing planned policies and development programmes. Some of the additional challenges facing the continent, besides building capacity where it does not exist, are to retain, harmonise, and utilise existing capacities. The Capacity Requirements for Agenda 2063, produced by the African Capacity Building Foundation (ACBF) for the African Union, identifies four main categories of capacity deficit: operational capacity of organizations; change and transformative capacity; composite capacity; and critical, technical, and sector-specific skills.

Role of SSC in capacity development programmes in Africa

Defined as "a means of promoting effective development by learning and sharing best practices and technology among developing countries," South-South Cooperation (SSC) represents an effective tool for capacity development and an instrument for progress. The concept is closely associated with that of Reverse Linkage, adopted by the Islamic Development Bank (IsDB) with the aim to maximise the benefits derived from SSC and adequately address the emerging demands of its member countries. In the context of African countries, SSC represents an integral part of capacity development efforts. Initiatives provided by developing countries for creating solutions are highly adaptable



South-South coordinated partnerships in Science, Technology and Innovation are key to Africa's socio-economic transformation²

to other developing countries operating within similar socio-economic, political and geographical contexts.

SSC represents an effective tool for capacity development as it ensures the creation of opportunities for countries to expand markets for their skilled workers, technologies, and products while making relevant, affordable technologies available to receiving countries. SSC also helps to increase cooperation among stakeholders to achieve the agreed goals as stipulated in Agenda 2063 and the SDGs. Moreover, it strengthens country ownership while enhancing the capacities of all stakeholders. SSC equally assists in expanding professional networks, increasing economies of scale through less duplication of effort, and promoting more robust sustainability, as the process is typically adapted to local contexts and capacities.

The crucial role of SSC in the various capacity development interventions is illustrated by several success stories. For instance, the support provided by Tunisia to the Kollo district of Niger through mobile clinics and personalised education for different target groups helped improve access to reproductive health services. Also, with expertise from Morocco, Mali was able to design and implement an inno-

vative solar energy project in rural areas. Thanks to this support and expertise, the country was able to carry out a feasibility study and develop a US\$17 million project on rural electrification, financed mainly by IsDB. Another example of SSC is the partnership between East Africa and India to promote the development of an ICT tool – the 'e-granary' – that supports the marketing of agricultural products and strengthens cross-border trade.

Understanding the importance of mapping resource centres as part of SSC

Mapping resource centres in Africa

The availability of a well-researched and validated roster of resource centres is the key to the success of SSC interventions. Resource centres are institutions that provide capacity development interventions and, most importantly, solutions to partner organizations in other developing countries. Mapping the resource centres in Africa is important in the context of SSC for at least three reasons.

Firstly, a resource centres map is an essential tool for creating a successful model of SSC in a heterogeneous and diversified socio-economic and political context such

as Africa. The continent contains diverse populations of over one billion, with about 3,000 ethnic groups, speaking thousands of languages. Moreover, African countries are endowed with high economic potential in various fields and sectors such as energy and mining, agriculture and arable land, human resources, and a large market for trade. With all of the economies at different levels of development, a mapping of the resource centres in the various countries can help support peer-learning, knowledge, expertise, experience sharing, and technology transfer, all crucial to SSC interventions.

Secondly, mapping the resource centres helps to create a global picture of the institutional actors and a better

understanding of their activities in connection with the development agenda and needs of each country. It also assists development partners and decision-makers in identifying, formulating and implementing policies and strategies, and, in this specific case, to help IsDB and its partners to better devise SSC interventions.

Thirdly, the mapping exercise is an effective mechanism to understand countries' capacities and experience as well as assess their ability to cooperate internationally within the framework of SSC initiatives. It is possible to assess whether the centres have the requisite institutional infrastructure for the exchange and sharing of skills, knowledge and experience with other partners in the African countries.,

Examples of resource centres in Africa

Below is a non-exhaustive list of resource centres, based on ACBF's experience in working on various policy related issues in Africa with the many institutions it has supported as well as the work done with IsDB.

The Kenya Institute for Public Policy Research and Analysis (KIPPRA): providing quality research and policy support to government and key stakeholders With the support of the African Capacity Building Foundation, KIPPRA is an autonomous public institute established in 1997. As a think tank, KIPPRA conducts research and analysis on public policy issues with the goal of providing advice and technical services to policy makers and stakeholders.

KIPPRA has created an enabling environment and has effectively contributed to increased demand for research to inform public policy. The Institute has, by and large, helped to intensify and expand dialogue on the role of research in public policy process by stakeholders from government, the private sector, and the media. Between October 2012 and May 2014, KIPPRA's main research products included three Kenya Economic Reports (2011, 2012, and 2013), 93 media articles, 40 discussion papers, and 72 client reports.

The Pan-African Institutes of Science and Technology (AIST): improving the quality of high education in science and engineering for effective technological innovations to support the economic development of Africa

AIST comprises the African University of Science and Technology (AUST) in Abuja, Nigeria; the International Institute of Water and Environmental Engineering (2iE) in Ouagadougou, Burkina Faso; and the Nelson Mandela African Institute of Science and Technology (NM-AIST) in Arusha, Tanzania. These institutions aim to build scientific and entrepreneurial skills in life sciences at a

pan-African level. With the support of ACBF and other partners, AIST has been providing high quality facilities for graduate and post-doctoral studies and research that has facilitated bridging the gap between research and industrial development through effective technological innovations for the sustainable economic development of the continent.

Again, with ACBF support, several Master's and PhD students have won various international awards including the African Women in Agricultural Research and Development (AWARD) fellowship sponsored by the Gates Foundation, USAID and the Alliance for Green Revolution in Africa. In 2014, following research works supported by ACBF through a scholarship and research seed fund, students published more than 385 peerreviewed articles in accredited journals.

The Institute of Food Technology (ITA): high quality agricultural products for a competitive and dynamic market

The ITA was established in 1963 to undertake research in food technology. It has five research laboratories focused on phytosanitary analysis, microbiology, chemistry, mycotoxins (harmful chemicals produced by fungi), and biotechnology.

The ITA has approximately 90 researchers and scientists, 19 per cent of whom are women, and has developed many technologies in the area of food processing. Using a training-of-the-trainers approach, the ITA is managing to train more than 100 women farmers per year. It is awarded an average of 50 contracts every year, both from the private sector and in public development projects, to carry out research and to develop products. It won IsDB's Prize for Science and Technology in 2007, in view of the importance of the research as well as its contribution to development in Senegal in general.



A report, launched by KIPPRA based on a study supported by ACBF, recommends that the Kenyan government should quickly adopt two national policies – one for agriculture as a whole and another for the tea sub-sector – if the country is to optimise its earnings by overcoming the bottlenecks that have dogged the tea industry for decades

How to conduct mapping of resource centres

The methodology used to conduct the mapping exercise may depend on the focus area and the purpose of the exercise. In the context of SSC, the process always ensures a consistent and structured framework to assess the capacities of the centres and identify those that qualify to collaborate in providing innovative interventions to meet the capacity development demands of partner countries. The common key steps involve:

- Identifying the themes to be mapped
- Defining the goals of the mapping
- Selecting the data to be collected based on the parameters defined in the goals
- Developing tools to collect data
- Collecting data with support from all stakeholders
- Synthesizing, analysing and interpreting the data
- Communicating and validating the findings
- Setting the priorities and action plan.



Since 2009, the ITA has been implementing a project to train women farmers in the north of Senegal to produce new varieties of sweet potato



South-South capacity development programmes that empower women are critical for Africa's socio-economic transformation

Lessons learned: some actions for future SSC and capacity development programmes in Africa

The documentation and communication of achievements and lessons learned are imperative to enable SSC to meaningfully contribute to Africa's development agenda. Critical to this is the systematic collection, compilation and augmentation of knowledge and data on SSC, as well as its dissemination to the public and key stakeholders. Even more important is the need to document what works, what does not work and why, as well as how to effectively conduct SSC.

Capacity development as a holistic approach

The performance of the resource centres and their ability to support SSC is strictly linked to their institutional and human capacities. An attempt to understand which capacity is lacking is often a challenging exercise, with various approaches leading to identification of resource shortfalls – human, finance,

systems, and/or incentives. Experience and documented studies urge a holistic approach to capacity development, given that hardware does not work without good software.

Effective support to coordinate capacity development programmes

Capacity development is at the core of all development issues and is a priority for both state- and non-state actors. Capacity development priorities should therefore include coordinated institutional development and mechanisms for delivering development services across the continent. More importantly, institutions like ACBF that have expertise, experience and the mandate of African governments to coordinate capacity development efforts, should be supported financially and technically to ensure operational effectiveness and the efficiency of the SSC initiatives in general, and the mapping of resource centres in particular.

Alliance to Fight Avoidable Blindness, a strategic partnership

Nigar Asgarova, Azerbaijan International Development Agency (AIDA)

elping those in need is one of the traditional values of the Azerbaijani people. Care and hospitality are deeply rooted in the culture of the nation, one that has chosen an independent path of foreign policy, based on historical experience, current achievements and a firm vision for the future. Dynamic economic development over the last decade has enabled a transformation from a recipient to an emerging donor of foreign aid. Today, Azerbaijan provides humanitarian, technical and financial aid to other developing countries to facilitate their efforts towards attaining prosperity and better living standards. Azerbaijan is an active participant of South-South Cooperation (SSC) and widely shares its experience and know-how with interested parties.

In the early years of independence, the Republic of Azerbaijan was confronted not only with social and economic challenges, but also with political instability aggravated by conflict with neighbouring Armenia over the Nagorno Karabagh region, resulting in the occupation of Azerbaijan territories and the notorious ethnic cleansing. The country faced humanitarian catastrophe with the expulsion of more than one million Azerbaijanis from their homeland. During these difficult times the country received continuous help and support from the international community. Today, politically stable and economically developed, Azerbaijan is a good example for many developing countries. The government continues to show its gratitude for the aid and support provided by donor countries and international organizations to help overcome the initial challenges of a newly-established state and is keen to assist countries facing similar challenges in socio-economic development.

The strategic partnership between Azerbaijan and the Islamic Development Bank (IsDB) serves to foster prosperity and stability worldwide. 2017 has been declared Year of Islamic Solidarity by the President of the Republic of Azerbaijan, H.E. Mr. Ilham Aliyev. This initiative shows the country's willingness to promote friendly and peaceful coexistence through all Muslim countries. In celebration of prominent achievements in sport and the important role that sport plays in developing mutual understanding



A man getting ready for prayer after successful cataract surgery by Azerbaijani doctors, Cameroon, 2013

and tolerance between nations, Azerbaijan hosted the 4th Islamic Solidarity Games in May 2017. The purpose of this event was to strengthen Islamic Solidarity at all levels, international, national and local.

Partnership with international organizations has flourished in diverse areas, including development assistance and humanitarian aid, with IsDB currently among Azerbaijan's main partners in promoting global sustainable development. The Azerbaijan government is highly committed to assisting the sustainable socio-economic development of developing countries, for which purpose the Azerbaijan International Development Agency (AIDA) of the Ministry of Foreign Affairs was established in 2011. The agency is an important tool through which Azerbaijan provides humanitarian and development assistance to countries that are in need of it. Healthcare and governance are among the main areas of cooperation in which Azerbaijan has achieved significant progress. AIDA works to ensure the exchange of know-how and experience in these areas between interested parties.

The various programmes are designed to share Azerbaijan's best practice with the developing world, involv-



Azerbaijani ophthalmologists working under difficult conditions, Burkina Faso, 2013

ing the country's leading experts. The relevant institutions are strongly interested in being involved in this partnership and are keen to respond to the needs of developing countries, with specialists, doctors and public officials always ready to help their counterparts to improve their knowledge, skills and capacities. AIDA has therefore become a liaison agency for Azerbaijan's relevant experts and institutions throughout the developing world, supporting the efforts of the international community in addressing social and economic challenges.



Azerbaijani doctors in Burkina Faso, 2013

Timely and coordinated provision of international aid in response to the steadily increasing number of aid applications from foreign countries is the principal task of AIDA. Since 2011, the agency has been actively working to promote the donor image of the country globally, to raise the effectiveness of the aid policy and to increase the number of partners and allies. From the very beginning, AIDA has been committed to the principles of collaboration, efficiency, transparency and equality in providing aid, implementing various programmes and projects in the fields of humanitarian aid and international development assistance. The provision of aid to foreign countries is aimed at enhancing international cooperation in the relevant areas. In this regard AIDA cooperates closely and implements joint programmes with the Organisation of Islamic Cooperation (OIC), IsDB, the United Nations Development Programme (UNDP) and other international organizations and donor agencies.

Since 2012, AIDA and IsDB have been strategic partners in the Alliance to Fight Avoidable Blindness, one of the long-lasting and successful programmes that AIDA is proud to be part of. The campaign addresses a very important challenge, especially in Sub-Saharan Africa, as



Alliance to Fight Avoidable Blindness campaign, Burkina Faso, 2015

cataracts are one of the most widely-spread eye diseases in these countries, coupled with a lack of local ophthalmologist surgeons. From 2012 to 2016, the campaign ran successfully in several African countries, including Burkina Faso, Chad, Djibouti, Benin, Guinea, Cameroon, Niger, Mali, Libya, Ivory Coast and Mozambique. Under the AIDA initiative, Azerbaijani ophthalmologists from the National Eye Centre, named after academician Zarifa Aliyeva, participated in the campaign by sharing knowledge and experience with their colleagues from aid receiving countries. The centre has been operating for more than 70 years and providing the Azerbaijani population with high level medical services. The ophthalmologists of this and other leading ophthalmological centres in Azerbaijan are ready to contribute to future campaigns and to assist IsDB member countries in increasing capacity of their medical specialists.

During the first phase of the campaign, more than 300,000 people undertook eye examinations and more than 56,000 patients, who have partially or fully lost their eyesight, regained their vision as a consequence of cataract surgeries carried out free of charge. Not only did the Alliance to Fight Avoidable Blindness campaign bring light to the lives of these people, but they also gained the opportunity of involvement in labour activity and the chance to earn their livelihood.

In addition, 177 local doctors benefited from professional training organized during the action. The capacity building part of the campaign both addressed urgent needs and facilitated the sustainable provision of necessary medical services by local specialists in the long term. This is a significant advantage of the campaign, as achieving sustainable results and finding enduring solutions for existing problems is more important than short term accomplishments.

In continuation of Azerbaijan's persistent support and strong commitment to the Alliance to Fight Avoidable Blindness campaign, the main partners, AIDA, IsDB, the Egyptian Agency of Partnership for Development (EAPD), the Humanitarian Relief Foundation (Turkey), and prominent non-governmental organizations specialized in ophthalmology - Nadi Al-Basar (Tunisia), the Prevention of Blindness Union (Saudi Arabia) and the national coordinators of campaign countries - met in Baku in May 2016. The main purpose of the meeting was to review the outcomes of the campaign held during the period of 2009–2015, discuss the forthcoming objectives and prospects for enlarging cooperation, as well as elaborate on the suggestions made during the initial meeting held in January 2016 in Rabat, Morocco, as a preparation for the campaign's second phase. Given the positive impact of the campaign thus far, the core activities of the second phase were approved for roll out over the next five years. Participants visited the National Eye Centre and representatives of IsDB visited the Central Clinical Hospital, the Azerbaijani Service and Assessment Network (ASAN) Public Service Centre and the Azerbaijan State Oil and Industry University to discuss the possibility of cooperation with the support of AIDA.

In order to expand the spheres of cooperation between IsDB and Azerbaijan, a delegation, led by the director of the AIDA, participated at a meeting for Scaling up and Enhancing Partnership for Sustainable Results among IsDB member countries, held in December 2016 in Jeddah, Saudi Arabia. The main objective included strengthening information exchange and encouraging cooperation among IsDB member



Alliance to Fight Avoidable Blindness campaign, Ivory Coast, 2015



Building of the National Eye Centre named after the academician Zarifa Aliyeva

countries' development agencies. The director of AIDA, Ashraf Shikhaliyev, and IsDB president, Bandar Hajjar, also signed the Protocol of Intention concerning SSC and Reverse Linkage. The document sets out the intention of exchanging knowledge and expertise as well as the organization of training and workshops to develop cooperation between the parties in various areas.

One of the leading areas in which Azerbaijan has succeeded significantly is the provision of public services through its ASAN service centres. Organized under the initiative of Azerbaijan's president, H.E. Mr. Ilham Aliyev, as a part of the public administration reforms, the ASAN service centre model is one of the domestic transformation success stories that has come to represent the "brand" of Azerbaijan and is shared internationally. The country promotes the principles of efficiency, transparency, accessibility and citizen convenience in the provision of public services, based on innovation and modernisation, through the ASAN service centres. By winning the 2015 United Nations Public Service Award, ASAN has been recognised for its advanced mechanisms and best practice in public service delivery, and there is increased interest by developing countries to learn and apply ASAN's experience. AIDA is contributing to the promotion of this experience with its capacities, diplomacy and partnerships network.

Thus, Azerbaijan's development assistance and humanitarian aid policy is focused on the SSC framework, through which AIDA's cooperation with IsDB in implementing the Alliance to Fight Avoidable Blindness campaign continues to reveal other prospects for this strategic partnership. AIDA's motto – Improving the World Together – includes the value of its collaboration with IsDB.

In addition to its cooperation in healthcare, mainly through the Alliance to Fight Avoidable Blindness campaign, and e-governance in the sharing of the ASAN Service experience, there are other domains to which Azerbaijan assists in capacity development such as education, science, information and communication technologies and others. Azerbaijan stands ready to expand its institutions' cooperation with developing countries and improve the outlook exponentially. AIDA would serve as the leading force of this honourable mission.



ASAN Service Centre putting a smile on the faces of citizens

The Brazilian experience of trilateral cooperation

Ambassador João Almino, Director; Counsellor Murilo Vieira Komniski, Advisor of the Director; Cecilia Malaguti do Prado, General Coordinator of Technical Trilateral Cooperation with International Organizations; Wofsi Yuri de Souza, General Coordinator of Technical Cooperation and Partnerships with Developed Countries, Brazilian Cooperation Agency (ABC)

rilateral technical cooperation is, for Brazil, a form of international development, complementary to South-South Cooperation (SSC), which can take various forms and methods of implementation involving several actors from public, private and civil society, cooperating with any combination of developing countries, developed countries and international organizations.

Rather than the more traditional Triangular Cooperation, trilateral technical cooperation is characterised by partnerships on a horizontal basis. It is guided by the principles of SSC and seeks to join efforts to facilitate the exchange of knowledge and experience for the benefit of developing countries. To achieve this goal, trilateral technical cooperation initiatives are anchored in added value and the comparative advantages identified by each partner, as well as in the effective participation of partners, both in a political, strategic dimension and the technical, operational composition that is guaranteed by governance spaces and shared management, and which allow an appropriate policy approach and joint reflection on the partnership efforts.

Trilateral technical cooperation is justified when it allows a larger scale and resource mobilisation for technical exchanges between the Global South, when configured as a natural extension of traditional cooperation received by Brazil from developed countries and when combining regional and global issues of collective interest, such as the fight against hunger. Hence trilateral technical cooperation is not designed as a variation of North-South Cooperation, but as a horizontal cooperation instrument that provides complementarity between technical, financial and human resources, combining cooperating stakeholders.

The Brazilian engagement in trilateral technical cooperation initiatives is guided by the principles of SSC – a demand driven approach towards developing countries; noninterference in the internal affairs of the recipient countries; and no imposition of conditionality or link between technical cooperation and commercial operations. Still, the experience of Brazilian technical cooperation points to the importance

of investing in the horizontality of relations and participation of partners as a strategy that strengthens the autonomy and promotes greater ownership, thus contributing to the sustainability of the initiatives and the potential results in catalysing development processes, following the conclusion of cooperation initiatives.

To fully accomplish the potential of trilateral partnerships in which the product of joint efforts can be greater than the sum of individual contributions, it is important to avoid asymmetrical relations and ensure appropriate conditions for the establishment of horizontal partnerships. The horizontality is related to shared management of projects and actions, implemented through direct and active involvement of the cooperating institutions in Brazil and the partner country(ies) from the planning stage to the monitoring and evaluation of results. Seeking to establish more equal relations, trilateral cooperation should recognize the different dimensions of power (such as financial and institutional capacities) so that they do not replicate or reinforce dynamics of traditional cooperation. For this reason, the Brazilian engagement in trilateral initiatives values the building of dialogue, joint participation at all stages.

The Brazilian Cooperation Agency (ABC), working under the Ministry of External Relations, is a coordinating body of technical cooperation, responsible for identifying and mobilising those national institutions with the necessary experience and readiness to actively participate in technical cooperation initiatives, and whose contribution is usually made through the allocation of technical labour hours of their specialists during the period necessary for the development of the project. The Agency acts, therefore, as a national focal point that coordinates dialogue between the various institutions that undertake trilateral initiatives of technical cooperation. According to its mandate and mission, the Agency facilitates the coordination of Brazilian state action with partners in trilateral technical cooperation, focusing on the maintenance and consolidation of relations with those partners, in line with the principles and broader agendas of Brazilian foreign policy.



Environmental technologies centre project – a trilateral initiative in partnership with the Brazilian National Service for Industrial Training (SENAI) and the governments of Germany and Peru to support the Peruvian National Service for Industrial Training (SENAII) in setting up a specialised environmental education centre.

Trilateral technical cooperation initiatives should promote a positive relationship for all parties and therefore should be combined with strategies that also strengthen the national implementing institutions. Therefore, it is important to identify the opportunities that every occasion offers for the design of partnerships to incorporate gains for all parties. In this sense, ABC has undertaken efforts to support the qualified participation of Brazilian institutions in technical cooperation initiatives, enabling the performance of its staff throughout the cycle of cooperation projects, as well as better management with all interested parties.

The trilateral partnerships established by Brazil are diverse and each has singularities in relation to the need of administrative harmonization. Not to encumber the implementation of trilateral initiatives, its legal and administrative instruments should be simplified and, at the same time, comply with legal requirements and current administrative rules for all partners.

Trilateral technical cooperation with Brazil is supported by a legal instrument, the Basic Agreement on Technical Cooperation, and a project document. It is possible, but not an absolute requirement, to establish bilateral programming instruments which carry a specific component for trilateral technical cooperation.

The Peru-Brazil-Germany trilateral cooperation project

As international markets are increasingly demanding industry compliance with environmental standards, Peru identified the need for introducing a new environmental regulation, for which Peruvian industry needed qualified staff and specialised professionals in consulting and laboratory services. The growing demand of those services already exceeded capacity within the country in terms of quantity and quality. As a leading institution with extensive experience in enhancing professional capabilities and in environmental control of industrial activities in Peru, the National Service for Industrial Training (SENATI) provided excellent resources to fill this void, and made the decision to invest in a Centre of Environmental Technologies (CTA).

During intergovernmental dialogue between Peru and Brazil, a cooperation project was formulated to build the CTA, for which purpose ABC mobilized the SENAI. And, considering Germany's reputation for advanced environmental technologies and professional training, the initiative opted for a trilateral cooperation project, in order to take advantage of both countries' complementary capabilities. The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH was therefore asked to cooperate on behalf of the German Cooperation for Sustainable Development.

Results and impacts

- Employees trained in teaching courses in Peru, Brazil and Germany are now working in the new Centre. The CTA's technicians are now able to train and advise companies, and to qualify technicians for the industry
- The CTA regularly offers technical education in environmental technology, air quality water treatment and industrial chemistry
- Specialisation in air quality and treatment of water and effluents, as well as short-term training on various topics are offered every year by the Centre
- By 2017, the CTA had 1,344 participants in training courses as well as 501 technical students, of whom 150 had already finished their studies
- The CTA is acknowledged as a partner by a broad range of sectors and is already being used as a model by SENATI to replicate in other regions of Peru. The Centre pays its operational expenses with revenues from its own services.

Contributions from the partners

- SENATI was in charge of project coordination; construction of the Centre's building; provision of equipment and infrastructure; establishment of a body of professional staff
- The Peruvian Agency for International Cooperation (APCI) accompanied the project implementation
- ABC coordinated the Brazilian contribution
- SENAI provided the CTA with consultation in administration and organization; design of the laboratory service offers; training of technical professionals in:
 - Water supply and sanitation
 - Clean production
 - Solid waste management and recycling
- GIZ advised the CTA in the development of new international networks and partners, including the private sector; construction of service offers; training of technical professionals in air and clean development mechanism; land and regeneration of degraded areas; energy efficiency and renewable energies; and technological innovation.

Project duration and cost

The project was launched in 2010 and concluded in 2016 with a total cost of US\$5.3 million, comprising:

- APCI / SENATI Peruvian contribution: US\$1.2 million
- ABC / SENAI Brazilian contribution: US\$2.8 million
- BMZ / GIZ German contribution: US\$1.3 million.

The Brazil-Cape Verde-Senegal cooperation project

The implementation of a census using electronic data collection is one of the successful social mechanisms that Brazil shares with its partners in the Global South.

The trilateral SSC project, Centres of Reference in Censuses with Electronic Data Collection, is funded by ABC, costing up to US\$500,000 and running between 2016 and 2019. It is a result of the partnership between ABC; the Brazilian Institute of Geography and Statistics (IBGE); the United Nations Population Fund (UNFPA); the statistical institute of Senegal, Agence Nationale de la Statistique et de la Démographie (ANSD); and Cape Verde's National Statistics Institute (INECV). The project aims to transform the statistical institutes of Senegal and Cape Verde into reference centres in electronic data collection technology for African countries so that knowledge may be shared with other nations of the continent.

Among topics covered during the training and exchange of experiences in the project are:

- Training of the census staff
- Census mapping applied to electronic collection
- Technological infrastructure, including methodology for the use of electronic data collection
- Electronic questionnaire, monitoring and control
- Awareness in society
- · Dissemination of data
- Fundraising for demographic censuses.

Improved data collection technology, made available through SSC, is expected to contribute to the development of the forthcoming censuses on the African continent, within the framework of the population and housing census 2020, and consequently to build an information base of statistics that supports the development of realistic and appropriate public policies. In addition, the project complements the actions already taking place in Africa to monitor the Sustainable Development Objectives of the 2030 Agenda, as well as the targets set out in the African Union 2063 Agenda, "The Africa We Want".

New areas of cooperation between ABC and the Islamic Development Bank

Potential areas of collaboration have been established between ABC and the Islamic Development Bank (IsDB) with the organizing, by ABC, of the symposium on South-South Cooperation: trends and challenges ahead of the BAPA+40 conference, held in Brasilia in March 2018, with the support of IsDB.

During the symposium, and with a view to exchanging opinions and deepening mutual understanding, participant countries were invited to engage in discussion on the main topics to be addressed at the United Nations Conference on South-South Cooperation (BAPA+40) to be held in Buenos Aires in March 2019.

SSC project to aid artificial insemination in Kyrgyzstan

Sarastina, Head of Marketing and Information Division, Singosari National Artificial Insemination Center (SNAIC)

South-South Cooperation (SSC) project between Indonesia, the Islamic Development Bank (IsDB) and the Kyrgyz Republic was begun in 2014 with a Memorandum of Understanding (MoU) to roll out an artificial insemination programme for the purpose of increasing livestock productivity in cattle as well as enhancing farmers' welfare. On reviewing the conditions in Kyrgyzstan, which are very different from those in Indonesia, it was clear that the health of the livestock met with many challenges including the prevailing weather and traditional methods of working. The objective was therefore to find solutions that could help overcome these challenges and increase livestock productivity.

Kyrgyzstan is a nation of 6 million people. Over 40 per cent of the total land area is given to pasture, and more than one in three of the Kyrgyz people depend on livestock for their livelihood. Farmers want to produce better quality meat and dairy products to maintain the Kyrgyz diet, but the nature and condition of the existing equipment, together with a lack of technological expertise and livestock management skills, have been hampering efforts to succeed.

The Kyrgyzstan government was aware of IsDB and understood that the organization has been working for more than 40 years to bring about faster economic growth and social



A SNAIC expert giving technical assistance to KSRIL Bio Centre staff regarding bovine semen production and bull management, Kyrgyzstan

development by helping member countries share expertise and experience to improve people's lives. Officials from Kyrgyzstan therefore asked IsDB for help in solving the country's livestock challenges, finding the solution through the method of Reverse Linkage (RL) with one of the bank's member countries more than 6,000km away in Indonesia.

Indonesia is an active IsDB member country with a population of 250 million, an emerging economy, and the capacity to provide expertise including disaster risk management, community development and aqua culture. Similar to Kyrgyzstan, agriculture is central to the economy.

One way to improve livestock breeding is by using artificial insemination (AI), a method that has a long history in the country, but new techniques are required. Kyrgyzstan's Deputy Minister for Agriculture, J Karimaliev, has observed: "Currently only 10 per cent of our livestock is inseminated artificially. We want to raise it to between 50 and 60 per cent, and more AI will help us increase the number of thoroughbred animals."

Leading the way in AI is Indonesia's Singosari National Artificial Centre (SNAIC), a technical implementation unit with more than thirty five years' experience. The organization's head, Enniek Herwijanti, has said: "At this centre we have been successful in helping Indonesia develop its livestock sector, and now we want to share with other countries." SNAIC has a strong commitment to promote and succeed in the government's programme for increasing livestock in Indonesia, and has been producing frozen semen from cattle and goats, working with the motto "one drop of semen, one million hopes".

The current three-year project between the two countries includes changing production systems and management as well as supplying technical skills, as agreed by the three parties through the MoU, with contributions from Indonesia as the donor country as well as the efforts required to make the changes from the recipient, Kyrgyzstan. It was agreed that the government of Indonesia, through SNAIC, would provide training to senior officials at the Kyrgyz Scientific Research Institute of Livestock and Pasture (KSRILP) on the high-level institutional management of the artificial insemination programme.

The training aimed to equip Kyrgyz technicians and KSRILP officials with the necessary knowledge and skills, including best practice and lessons learned from SNAIC's experience, as well as the critical building blocks needed to better plan, design and manage an AI programme. Also provided were:

- A technical training series at SNAIC for up to 86 Kyrgyz technicians to upgrade their skills and knowledge in
- various aspects of animal reproduction including AI, pregnancy diagnosis, frozen semen handling, bull management and animal feed preservation
- Nine high level management officials from the Indonesian delegation, including SNAIC, operating in a supervisory capacity, plus eight experts dispatched between 2015 and 2017 for technical assistance on AI management,



Traditional ceremony to welcome the SNAIC delegation and Kyrgyzstan team led by Prof. Kydyrmaev (second from right)



Horse riding is the most popular sport in Kyrgyzstan, with a long history following in the footsteps of warriors, nomads and Silk Road traders



Technical assistance in the storage of frozen bovine semen

breeding, feeding and rearing management, progeny testing programmes, and a workshop on semen production and quality – all to further consolidate and strengthen the capacity of the Kyrgyz technicians and KSRILP to meet acceptable international standards

- The equipment, if needed, to enable the KSRILP training to meet acceptable international standards
- Facilitation and assistance on logical and administrative procedures such as arranging visas for KSRILP participants
- A portion of the costs.

The training focused on the Kyrgyz participants learning how to identify high-value semen samples and how to operate the AI technology, ensuring that the product is properly frozen and reaches the farmer on time. After two weeks in technical training, participants had learned the technicalities of AI storage. Kyrgyz participants were then able to share what they had learned at SNAIC with AI specialists in Kyrgyzstan with the hope of significantly increasing livestock productivity. SNAIC also assessed the skills acquired at the farms.

The Kyrgyz delegation has been very impressed by the management and technology used for feeding, collecting and processing milk. The entire RL programme has run

smoothly and successfully over the three-year period with the continued efforts and guidance of Aminuddin Mat Ariff, senior capacity development specialist at IsDB.

The collaboration has been hugely beneficial for all concerned. The hard work of IsDB, the government of Indonesia and of Kyrgyzstan has borne fruit through teamwork, which has been invaluable considering the limits to understanding created by the unfamiliarity of the languages in each case. As a result of RL, farm productivity has grown significantly, especially meat production, owing to the now excellent condition of the cattle and goats. Kyrgyzstan has now requested that the programme should be continued.

The export-import balance between the two countries involved has met the desired objectives, which may lead to future business relations between the two sides. On a non-financial level, the two countries have been able to share their cultures and working traditions, individual customs, cultural heritage and religious views.

These positive results have become an example of interest to Suriname who wants to evolve the SSC RL programme with the opportunity to progress links for education and the provision of scholarships for students from Suriname and Kyrgyzstan to benefit from Indonesian expertise.

UNCST—IsDB project contributes to environmentally friendly charcoal industry in Uganda

Dickson Avutia, Charcoal Briquettes Project Manager and Head of Business Development; and Bashir Rajab Kagere, Project Monitoring, Learning and Evaluation Manager and Head of Policy Analysis and Development, UNCST

Imost all households in Uganda use either firewood or charcoal for cooking. In 2001, at least 94 per cent of Ugandans depended on wood fuel for cooking. However, in 2016/2017 the number had reduced to 90 per cent,² due mainly to the adoption of cheaper sources of energy. Wood fuel is estimated to contribute US\$74.8 million to Uganda's GDP and provide 20,000 jobs to Ugandans³. However, these economic gains have led to significant environmental degradation, eating away Uganda's forest cover. The country loses 92,000 hectares of forest cover annually⁴ – a loss of about one quarter in less than two decades. At this rate, forest resources are likely to be exhausted by 2050.

Uganda's population is estimated at 38.8 million⁵. Of these, about 75 per cent live in rural areas and depend on subsistence agriculture, lacking modern sources of energy such as hydro-electric power, liquefied petroleum gas or kerosene for domestic use. The agricultural sector which also covers the forestry sub-sector contributes over 90 per cent of Uganda's energy requirements in terms of firewood and charcoal. Uganda meets more than 93 per cent of its energy demand with biomass, 6 per cent with fossil fuel combustion and only 1 per cent with electricity from hydro and fossil fuelled thermal power plants. By 2014, access to electricity (by percentage of population) stood at 20.4, with urban population coverage at 51.4 and rural at 10.3.6

The demand for firewood for cooking exceeds natural reproduction, leading to deforestation.⁷ The use of firewood and charcoal has also resulted in the depletion of resources such as wetlands, forests, pastures, and fields. Climate change is evidenced by a reduction in water levels in rivers, lakes, and swamps. The ever-rising costs of alternative sources of energy, namely hydro-electric power, kerosene and gas has caused both urban and rural populations to depend heavily on wood charcoal and firewood as a source of cooking fuel.

In 2006, the household consumption of firewood and wood for charcoal was estimated at 22.2 million tons,⁸ with small industries consuming a further 5.5 million tons creating a

total annual biomass demand of 27.7 million tons nationwide. Annual biomass consumption per capita is estimated, for rural and urban areas respectively, at 680 kg and 240 kg of firewood and 4 kg and 120 kg of charcoal. Approximately 4 million tons of wood (15 per cent of the total) are consumed to meet the annual demand for charcoal, which in 2010 was estimated by different sources to be between 700,000 and 850,000 tonnes. In Kampala alone charcoal demand was 205,852 tons. Used mainly in urban areas, charcoal use is estimated to increase at 6 per cent per year, which matches the rate of urbanisation.

The intervention

The Government of Uganda, through the Uganda National Council for Science and Technology (UNCST) obtained a grant from the Islamic Development Bank (IsDB) to undertake a pilot project on Transfer and Commercialisation of Charcoal Manufacturing Technology to Farmers and Entrepreneurs in Uganda. The project objectives were to contribute to improving livelihoods, to generate employment and to augment income through technology transfer. In particular, the initiative sought to promote the use of agricultural waste, sawdust, and other bio-waste from wood in the production of charcoal briquettes for cooking. The project also aided the education of local communities in the production and use of the new technology (charcoal briquettes); development of micro-enterprises; marketing of the briquettes; emphasis of the environmental concerns of using wood charcoal, mitigation of deforestation and encouragement of afforestation strategies. By introducing this technology to the communities, the production of charcoal briquettes from organic waste would gradually replace charcoal and fuel wood. The target beneficiaries were, among others, farmers, wood and charcoal producers, entrepreneurs, women, and the youth.¹⁰

Project methodology and implementation modalities

The project became effective in July 2011 with a target of 20 districts out of the country's 112. The districts were selected



Visit by Aminuddin Mat Ariff, Senior Capacity Development Specialist, Islamic Development Bank, to the Farmers' Development Trust in Iganga, Eastern Uganda, who benefited from the project funded by IsDB

as representative of the five regions of the country – North, East, West, South-West, and Central. The selection process was influenced in each case by the extent of environmental degradation, energy use practices, agricultural practices, and population size. Each group had to comprise a metal welder and an entrepreneur. On average, 30 to 35 people per district, during a four-day structured training programme, would be trained in the process of pyrolysing agricultural waste for the production of char powder, fabricating kilns from locally available metals such as drums, making briquettes and starting a charcoal briquette business. In order to improve the pace of technology adaptation and uptake, the project provided kilns, extruders and mounting tables to the best performers in each group.

Impact of the charcoal briquettes project

Although the project did not have the resources to undertake a full impact study, the knowledge flow has generated significant impact in the economy, with the private sector, not for profit organisations, and government playing major roles.

During project implementation, UNCST partnered with Appropriate Rural Technology Institute Uganda (ARTI-U) to train the beneficiaries in metal fabrication and provide hands-on training in briquette making. ARTI-U also trained Vincent Kienzler, proprietor of Green Bio Energy Ltd (GBE), who launched the company in 2012. GBE is an award-winning social enterprise based in Uganda, which produces a new generation of clean and affordable charcoal briquettes called Briketi. Initially, the only briquettes on the



The industry is characterised by hundreds of small-scale producers who use simple equipment for briquette production

Ugandan market were from South Africa. To date, GBE is Uganda's leading producer of charcoal briquettes which can be found in the country's main supermarkets. The company now trains clients and communities using a methodology based on proven technical and business achievements.

During the training period, it was discovered that the briquettes burn longer and better in improved clay cooking stoves. Ordinary charcoal stoves lose heat and are less efficient for cooking. Several organizations and private companies are increasingly taking interest in the development of clean cooking options by providing various technologies ranging from fuels, biogas and improved stoves.

The number of charcoal briquette producers and consumers has gradually increased since the technology was introduced. The industry is characterised by hundreds of small-scale producers who use simple equipment for briquette production. The majority make briquettes by hand in very small quantities – less than 2 tonnes per year – mainly for their own consumption, selling the remainder to the community to supplement their incomes. The biggest challenge to this initiative has been the transition from the use of locally fabricated subsistence equipment to motorised

equipment for commercial use. Such a transition requires additional capitalisation for those companies that have excelled using the locally fabricated machines.

Unintended outcomes and impacts

The project had unintended outcomes both in the districts and within the communities. In particular, increased awareness on the effects of environmental degradation resulted in some districts resurrecting ordinances or bylaws on specific practices detrimental to the environment. Most of the local governments have increased taxes on wood charcoal, transportation and sale as a way of reducing tree cutting. Vegetable farmers have discovered that the ash generated from pyrolysing agricultural waste to make charcoal briquettes specifically from bean stalks, maize stalks, groundnut stalks, and millet are a rich source of cellulose which makes very good fertiliser for vegetables and other light seasonal crops including bananas.

Wider issues

In February 2017, the African Development Bank offered a grant of US\$1 million to Earth Energy Limited to develop a 20MW biomass power plant in northern Uganda in order to

mitigate climate change due to deforestation. A department of biomass was also recently created at the Ministry of Energy and Mineral Development to ensure sustainable biomass supply and efficient use of the biomass resource. The biomass department has developed a Biomass Energy Strategy for Uganda. The office of the president has also shown interest in biodiversity conservation and supported the introduction of an energy efficiency and conservation bill.

The need for modern biomass energy has become more tenable due to increasing costs of firewood and charcoal for cooking, rising electricity demand, and the diminishing sources of wood charcoal. With the price of charcoal increasing every day, charcoal briquettes are beginning to make financial sense. If effectively utilised, the initiative can become a lasting solution to climate change and global warming as it significantly minimises the felling of trees and indoor pollution that affects the lives of many people. However, there is still need for major investment to ensure a regular supply of briquettes.

The charcoal briquette technology contributes a very small percentage towards the reduction of environmental degrada-

tion. It is therefore necessary to promote other technologies such as brick making that does not require use of firewood; low cost roofing material that reduces the use of timber; and low cost environmentally-friendly lighting technologies.

Conclusion

Although this was a pilot project that officially closed in 2014, its impacts have lived on through knowledge sharing and technology transfer. When the project was introduced in 2011, farmers were used to burning agricultural waste but had no other interest in it as they did not know that it had alternative uses that would generate income and become an alternative source of energy for cooking.

In recent years, charcoal briquette businesses have gown up throughout the country, charcoal briquettes constitute 6 per cent of the total biomass energy consumption, government has introduced new directives and strategies to curb deforestation, UNCST has obtained new national and international partnerships on charcoal briquettes, and the production of charcoal briquettes has created new sources of employment and income among others.



The majority of manufacturers make the briquettes by hand in very small quantities, mainly for their own consumption, selling the remainder to the community to supplement their incomes

MEDRC and knowledge sharing for water desalination

Jauad El Kharraz, Middle East Desalination Research Center (MEDRC)

he Middle East and North Africa (MENA) region will be facing the major challenge of a widening gap in water supply and demand by 2025. This is attributed to limited renewable water sources and an anticipated high population growth. The increases in water requirements for the dynamic socio-economic development of the region will also be affected negatively by climate change. Overcoming the expected water deficit in 2025 will require an estimated 237 billion m³, making it necessary to augment supply through desalination, increased water reuse of adequately treated wastewater sources and the mining of non-renewable groundwater.

Desalination is becoming increasingly important as a solution to the region's water problem. Many water-stressed Islamic countries are increasing their supplies through desalination to meet the needs of a continuous growth in population and industry, tourism, and developments in agriculture. Several projects have been announced recently, including nine new desalination projects at the red sea cost of Saudi Arabia, and several new desalination projects are planned in Morocco, Tunisia, Egypt, Libya, UAE and Oman. Desalinated water can no longer be considered a marginal resource as some countries such as Qatar and Kuwait are 100 per cent reliant on it for domestic and industrial use, whereas the reliance of Saudi Arabia is nearly 60 per cent. These huge capacities in the region have been brought about by technological improvements, which have led to a drop in the cost of desalination. Currently, the global market is led by Saudi Arabia with a total cumulative capacity higher than 10 million m³/day.

However, the process of desalination is not itself environmentally friendly and seawater desalination plants also contribute to wastewater discharges that affect coastal water quality. This is mostly due to the highly saline brine that is emitted into the sea, which may be increased in temperature, and contain residual chemicals from the pre-treatment process as well as heavy metals from corrosion or intermittently used cleaning agents. The effluent from desalination plants is a multi-component waste, with multiple effects on marine ecosystems, and therefore affects the quality of the

resource it depends on. Clearly, there is a need to deal with the environmental impact of desalination, and reduce the cost of such energy-intensive technology.

The Middle East Desalination Research Centre (MEDRC) was established in Muscat, Oman, in 1996 to deal mainly with those challenges. As a centre of excellence in desalination and water reuse technology, MEDRC's mission includes promoting and supporting the use of desalination to satisfy the needs of the people of the MENA region, by providing available, affordable, clean freshwater for human use and economic development. This is accomplished through the advancement of desalination technology, education in the technology and training in its use, technology transfer, technical assistance, and building cooperation among nations to form the joint projects and international relationships necessary to meet the needs for freshwater.

The main objective is to develop and foster productive partnerships between desalination private industry, academia, regional communities, and the Centre, in order to optimise available resources and leverage MEDRC's investment in desalination activities, as well as to maximise involvement of the desalination players to advance technology exchange, particularly among regional experts.

Desalination capacities over a range of Islamic Development Bank member countries

Online Plants	Capacity (m³/day)			
Senegal	545			
Mauritania	2,240			
Morocco	195,260			
Algeria	2,319,806			
Tunisia	146,215			
Libya	513,092			
Palestine	27,536			
Jordan	271,077			
Saudi Arabia	10,038,876			
Oman	1,301,483			
Total capacity	14,816,130			

Source: DesalData 2017



Desalination for agriculture in Oman, funded by the Agriculture and Fisheries Development Fund. This reverse osmosis unit is fed by a solar photovoltaic system, MEDRC facilities, North Al-Hail, Oman

In more practical terms MEDRC intends to contribute to lowering the cost of desalination technology, making it more affordable to resolve long-term water scarcity needs in the MENA region.

MEDRC holds a wide-ranging portfolio of more than 200 environmental research projects with a total project value of more than US\$14 million which has involved bringing the best regional and global expertise together, along with regional researchers from 34 countries, to help find solutions to the challenge of fresh water scarcity in the region. To this end MEDRC has supported more than 115 regional nationals with Master's and PhD water research fellowships in its regional fellowships programmes. MEDRC has been conducting a full range of training programmes in reverse osmosis and water management, involving more than 2,200 trainees among desalination plant staff and water authorities as well as new graduates. MEDRC research projects have led to more than 300 scientific papers published in international journals, and countless reports.

Efficient desalination, better water reuse and a shift to renewable technology is urgently needed to meet the challenge of fresh water scarcity, and MEDRC aims specifically at conducting, facilitating, and promoting basic and applied research in the water desalination field, including reverse osmosis (RO) membrane technologies and renewable energies (RE)-based desalination, as well as dealing with environmental impact concerns. Its aim is to become the regional hub for exchanging and transferring knowledge on the most innovative and efficient technologies of desalination between and within the MENA countries, including the hosting country, Oman.

Two basic technologies have been widely used to separate salts from ocean water – thermal evaporation and membrane separation. In the last ten years, RO technology has come to dominate desalination markets, due mainly to its low investment and total water costs achieved by lowering, to approximately 3 KWh/m³, the energy consumption.¹ Since the energy requirements in desalination processes play



Reverse osmosis pilot plant at MEDRC facilities, North Al-Hail, Oman

a decisive role, renewable energies are considered attractive because they offer a sustainable and secure method. There is great potential for developing solar desalination technologies, especially in the MENA region where the solar source is abundant and the installed photovoltaic (PV) costs are declining. Until recently, only small desalination plants in remote areas with no grid electricity and no skilled manpower used RE, but as research and development have intensified, several pilot desalination plants in the MENA region have been operating successfully using mainly solar energy.

There are several ambitious projects in Saudi Arabia and the UAE to develop large solar desalination plants, including a project in the area of Al-Khafji on Saudi Arabia's eastern coast and one in the area of Ras Al-Khaima in the UAE. Both plants are set to become operational by 2020 and will be among the largest in the world – the initial phase of Al-Khafji solar desalination plant will produce 30,000m³/day, a capacity that will double in the next few years. The Al-Khafji one will be a disassociated RO and PV system. RO will take energy from the grid and PV will be injected into the grid, compensating for the energy load. A similar principle is behind a desalination plant that was announced

in 2017 by the Moroccan authorities in Agadir. The benefits of the principle are clear – not only does it cut costs, but it also reduces carbon dioxide emissions and fossil fuel dependency. Several successful solar desalination projects have been implemented in the MENA region, but on a small scale. In Oman, solar energy has been a key area for the Research Council, Sultan Qaboos University and MEDRC.

The recommendations are to:

- Develop a comprehensive regulatory framework related to desalination and provide incentives to reduce the carbon footprint as well as the environmental impact
- Support the existing technology centres and science parks in the MENA region
- Expand and support technical and vocational training programmes in desalination, including e-learning
- Set up extensive educational specialisations and social partnerships in desalination and water treatment
- Increase regional research and development cooperation to ensure that the MENA region becomes an innovation hub in desalination technology.

In the context of boosting South-South Cooperation (SSC) MEDRC teamed up with the Islamic development Bank

(IsDB) and the National Office of Electricity and Water Supply (ONEE) of Morocco to organize the international Peer Learning And Knowledge Sharing Workshop on Water Desalination in Muscat, Oman, in January 2018. The workshop was the result of an arrangement by the three parties to look for a means to collaborate in areas specifically related to desalination, especially in research and capacity development. The workshop offered the organising parties the opportunity to assess support requirements and to establish a framework for the development of SSC among IsDB member countries and future collaborative efforts that respond to those needs. The three-day event offered a platform for peer learning and knowledge sharing and strengthened MEDRC's reputation as a regional hub and catalyst for the development of solutions to fresh water scarcity. The workshop brought together ten IsDB member states including Oman, Morocco, Jordan, Palestine, Saudi Arabia, Algeria, Tunisia, Mauritania, Senegal and Libya.

The knowledge sharing workshop aimed to:

- Generate knowledge among the participants about available tools and approaches in water desalination and its applications and related technical areas in IsDB member countries
- Map knowledge and capacities in ONEE and MEDRC and the needs in IsDB member countries that could be met by ONEE-MEDRC joint actions
- Gauge demand for and interest from member countries for the use of such tools
- Assess priority knowledge, support and capacity needs for water desalination in member countries where MEDRC support is required
- Identify modalities for further deepening of cooperation between IsDB, MEDRC and ONEE on mutual areas of interest by preparing a funding proposal for capacity development responding to IsDB's capacity development vision.

The workshop was a good opportunity to present the state-of-the-art of desalination projects in IsDB participating countries, and to discuss their main challenges, and also to map the needs and knowledge localised in some areas. In addition, the participants got the opportunity to visit the Ghubrah Plant, one of the biggest desalination plants in Oman, as well as MEDRC RO Pilot Plant. Representatives of those countries agreed to strengthen their partnership in the framework of an informal network, coordinated by MEDRC. They also drafted a joint mid-term roadmap and agreed to meet annually to review progress. The roadmap aims to:

• Enhance collaboration between interested countries to embark on knowledge-sharing actions

- Map and document centres of excellence and the proven solutions on water desalination available in the participating countries, including success stories, good practices, and technology such as small, autonomous desalination systems fed by renewable energy
- Conduct training and policy dialogue on desalination
- Set up an annual meeting or forum to discuss priorities and to follow up on the joint activities implementation.

However, the IsDB countries need to localise knowledge. Desalination has been used as a source of freshwater for more than 50 years but every component of the desalination plants is still imported. In addition, there are not enough qualified staff to operate modern desalination technologies, including solar desalination plants. This is why it is important to invest in research, training, knowledge transfer and capacity building. By designing incentives for local businesses, governments can attract domestic investment in manufacturing key components and cultivating local innovation to attain economic sustainability.

Steps should also be taken to attract local investors using set targets for locally produced products and the labour force and to manage these assets by minimising the life-cycle cost of water and the environmental impact. In the same way as private enterprises, government enterprises should value energy at world market prices and provide incentives for in-house research and development departments to promote innovation in technology and operation.



Visit to the MEDRC RO Pilot Plant by participants of the MEDRC–IsDB– ONEE peer learning and knowledge sharing workshop on water desalination, Muscat, Sultanate of Oman, January 2018

ISTIC as an international platform for SSC in science, technology and innovation

Dr. Sharifah Maimunah Syed Zin, Director, ISTIC

he sharing of resources, technology and knowledge has the effect of improving a population's well-being and helping to meet development goals, which is why developing countries are encouraged to assist each other in all fields – political, economic, social, environmental and technical. Science, Technology and Innovation (STI) are therefore recognised as major vehicles in promoting development and uplifting economic prosperity.

The International Science, Technology and Innovation Centre for South-South Cooperation (ISTIC) was set up under the auspices of UNESCO in response to a request to integrate a development approach into national STI policies and capacity building to provide policy advice; facilitate the exchange of experience and best practice; create a problem-solving network of centres of excellence in developing countries; and support the exchange of scientists, researchers and technologists among those countries. The establishment of ISTIC in 2008 was approved at the 34th UNESCO General Conference under an agreement signed between the government of Malaysia and UNESCO, and followed the outcome of the Second South Summit of the Group of 77 and China in 2005.

ISTIC is a UNESCO Category II Centre, meaning that it is legally not part of the UNESCO organization but is associated with it through an agreement which allows the use of the logo, and carries the requirement to support and implement UNESCO's agenda and programmes. ISTIC receives funding from the government of Malaysia through the Ministry of Science, Technology and Innovation (MOSTI) for its overall operation and programmes.

ISTIC has a governing board that oversees its strategic direction and approves the programme and finances, with current members comprising eminent experts, 25 from developing countries and 8 from developed countries. Membership from the latter is important in providing up-to-date developments in STI that can benefit the countries of the Global South.

ISTIC's activities focus mainly on capacity building, innovation excellence, information sharing, consulting and publication. To progress this agenda, ISTIC conducts training programmes in six priority areas identified currently as the most relevant for developing countries:

STI policy for development

Many countries of the Global South do not have STI policies to guide national development, and capacity is lacking in many of those countries where STI systems are fragmented, with little coordination. ISTIC's programme provides capacity building for personnel involved in STI polices at management level as well as that of high level policy makers. The main aim is to enhance their roles in national development and their contribution to the economic wealth and well-being of the nation.

Maintenance of infrastructure

Developing countries have many infrastructure projects but there is little local capacity to maintain and keep the infrastructure in good order. The programme is aimed at providing exposure of participants to the latest technology and methodology for the maintenance of infrastructure in developing countries.

Technopreneurship

This programme focuses on equipping researchers at universities and research centres with the knowledge and skills to commercialise their products or the outcomes of their research studies. Participants are guided on developing business plans, branding and marketing. It is acknowledged that such skills are lacking among researchers in developing countries.

Inquiry-based science education

Designed to assure a continuous supply of creative and discerning STI professionals, the programme concentrates on developing skills and knowledge among science educators in using inquiry-based science education (IBSE) as an effective method of teaching science in schools.



Training Workshop on Science, Technology and Innovation Policy for Development: Group Project

Women in STI

This programme emphasises the need for policies on the contribution of STI-savvy women in national development and the preparation of women to develop their talents and competence in occupying senior positions within organizations.

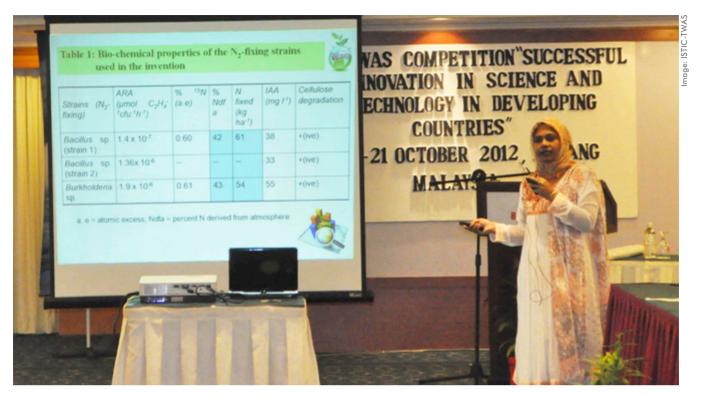
Digital technology

This is aimed at ensuring that developing countries are not left behind in the pursuit of economic development due to an absence of technological capacity to harness new opportunities that will generate income, jobs and revenue. The main objective is to provide the necessary knowledge and skills to support STI agenda through the establishment of systematic knowledge management with a big data technology application.

From January 2009 to October 2017, ISTIC conducted 74 programmes, benefiting 3,379 participants, and has reached out to 104 developing countries including 9 non-member G77 countries. In fulfilling its objectives and developing networking and collaboration at regional and international levels, ISTIC has conducted joint programmes with several organizations. It has signed a Memorandum of Understanding with:

- Islamic Science, Education, Social and Cultural Organization (ISESCO)
- Korea Institute of S&T Evaluation and Planning (KISTEP)
- Economic Cooperation Organization Science Foundation (ECOSOF)
- La main à la pâte Foundation
- Centre for Science and Technology of the Non-Aligned and Other Developing Countries (NAM S&T Centre)
- Future University of Sudan
- Council for the Regulation of Engineering in Nigeria (COREN)
- National Institute for Science and Technology, Seychelles (NISTI)
- UNIDO Centre for South-South Industrial Cooperation (UCSSIC) China
- Isfahan Regional Centre for Technology Incubator and Science Park Development (IRIS)
- International Knowledge Centre for Engineering Sciences and Technology (IKCEST)
- International Centre for Engineering Education (ICEE).

ISTIC also maintains networks with more than 60 organizations. Under the strategic partnership, some of ISTIC's



A participant from Bangladesh presenting her case study for the ISTIC-TWAS competition, 2012

programmes have been held in other countries such as Korea, Indonesia, India, Iran, Kenya, Myanmar, Sudan, Nigeria, Ecuador, Trinidad and Tobago, Kuwait, Egypt, Kazakhstan and Mongolia. The programmes are conducted on a cost sharing basis in which ISTIC or the host country bears the local cost such as fees, food and accommodation, while participants pay for their travel expenses. ISTIC gives priority to applications from Least Developed Countries (LDC) and Small Island Developing States (SIDS).

ISTIC is fortunate that through its strategic partnerships with ISESCO and the Islamic Development Bank (IsDB), participation from those organizations' member states has been made possible. IsDB gives annual financial support for programmes under STI policy for development, technopreneurship and women in STI. This financial assistance had benefited 113 participants using 32 international experts from 27 IsDB member countries. In line with UNESCO's emphasis on gender equality and women's empowerment, ISTIC ensures that women are well represented in its programmes.

In collaboration with The World Academy of Sciences (TWAS) based in Italy, ISTIC organises a joint competition for innovation in science and technology in developing countries among participants of the technopreneurship training programmes. Held on alternate years, the competition involves the collection of case study summaries on

how innovations in science and technology have impacted the Global South. Submissions are assessed after which 20 candidates are invited to prepare full length reports detailing their experiences. Successful candidates are invited to share these experiences in a workshop. An expert panel of judges evaluates the presentations and the best three are given awards of US\$5,000, US\$3,000 and US\$2,000 for the first, second and third places respectively. Edited versions of the cases studies are jointly published by TWAS and ISTIC and distributed to developing countries. The programme on STI policy for development enables successful candidates to be awarded advanced certificates through online instruction from ISTIC's partner, the Technology University of Malaysia. The certification serves as an added qualification for entry into a Master's degree programme in STI policy.

ISTIC pays particular attention to the sharing and dissemination of information to G77 member countries. This is done through special briefings to the permanent delegations to UNESCO at its head office in Paris. The ISTIC website contains information on its programmes and activities. For IBSE, ISTIC undertakes translation activities in which classroom resources in French are translated into English. The special La main à la pâte mirror website (istic-ibse.org) gives English speaking science educators access to free English versions of science classroom materials. Hard copies are given to all workshop participants.

In addition to training programmes, ISTIC also provides expert advice in related fields and is often invited to participate in international conferences and seminars as speakers.

UNESCO category II centres are subject to reviews every five years. A review of ISTIC was conducted in 2013, five years after it was established, to assess its performance and suitability to continue as a category II centre. The positive outcome of the study resulted in the signing of a second agreement between the government of Malaysia and UNESCO, with ISTIC continuing to operate as a UNESCO category II centre and promoting collaboration for the benefit of developing countries until 2021. Another review will be made before that date.

Benefits to the target group

A concern often expressed is to what extent do the programmes benefit the target group. Feedback received on two programmes funded by IsDB indicate the positive impact of the training workshops. Of the STI policy for development workshops, participants agreed that they have contributed to the advancement of skills and knowledge as well as to the development of STI policy in their organizations and countries. Regarding technopreneurship, the programmes had significant impact on participants' motivation to become technopreneurs. 14.5 per cent of participants have set up their own business, 21 per cent have commercialised their products, and 35 per cent have secured their products and ideas with intellectual property status.

ISTIC has proven to be an asset both to the government of Malaysia and, in the wider context, to SSC. ISTIC has received accolades from the Director General of UNESCO, the French Development Bank and the United Nation's Office for South-South Cooperation, all of which has been a motivation and inspiration for ISTIC to continue efforts in fulfilling its aims and objectives as an effective platform for



The winner of the first prize of the ISTIC–TWAS Innovations in Science and Technology in Developing Countries 2015 competition, demonstrating the Smart SIM simulation programme that helps practitioners to learn the technique of minimally invasive surgery

SSC and to assist developing countries improve their science and technology systems. The aim of inclusivity remains a challenge, particularly for the small island states and least developed nations, but this can be minimised by establishing strategic partnerships that can provide both expertise and financial resources. ISTIC will continue to strive hard in this endeayour. A New Dawn.

ISTIC Programmes June 2009 - December 2017

Agenda	Programmes	Participants	Countries
STI Policy	21	822	84
Women in STI	7	692	56
IBSE / STEM	15	612	48
Maintenance of Infrastructure	10	372	36
Technopreneurship	15	427	62
Digital Technology	1	29	12
Briefings to G77 / UNESCO	4	175	60
ISTIC 5th Anniversary Conference	1	250	87
Totals	74	3379	

Source: ISTIC-TWAS

ECO Science Foundation — a catalyst for promoting science, technology and innovation in the ECO region

Prof. Dr. Manzoor Hussain Soomro, President, ECOSF

n the era of globalisation and knowledge-based economies, the role of Science, Technology and Innovation (STI) is critical in the effort to achieve inclusive economic growth and sustainable development. Adequate investment in STI builds a strong foundation that helps sustain growth as well as boost community well-being and the integrated development of any nation. However, there is recognition of a demand and supply gap in the STI workforce in the Global South. Current efforts are not enough, and there is a long way to go in order to bridge this gap. We must therefore consolidate efforts by developing effective collaboration mechanisms and leverage our limited resources to make a significantly large impact without duplication of effort and a waste of resources.

The Economic Cooperation Organization Science Foundation (ECOSF) is an intergovernmental body and specialised agency of the Economic Cooperation Organization (ECO). It was established in Islamabad, Pakistan in 2011 with a mandate to promote scientific and technological research with the goal of raising the socio-economic standing of ten member states – Afghanistan, Azerbaijan, Iran, Kazakhstan, the Kyrgyz Republic, Pakistan, Tajikistan, Turkey, Turkmenistan and Uzbekistan. ECOSF serves as a platform for contribution towards the promotion of Science, Technology, Engineering and Mathematics (STEM) education to strengthen the science base of future generations and the regional economy of ECO member states.

The Foundation is at the cornerstone of Triangular Cooperation (South-South-North) in STI capacity building. Despite its relatively young age, it has established itself as a successful regional organization with a strong working collaboration with a number of key players. ECOSF has undertaken initiatives that supplement and compliment its STI programmes with the help of strategic partners to boost capacity building and contribute towards regional cooperation and economic and cultural integration. It strives to engage youth in all its activities and integrates a gender perspective into policies, plans and actions directed towards

socio-economic development in line with UN Sustainable Development Goals (SDGs) and the ECO Vision 2025.

The rapid industrialisation and economic boost achieved by the Four Asian Tigers – Japan, Singapore, South Korea and Taiwan – is encouraging. Despite being low in natural resources, these economies have achieved exceptionally high economic growth, linked mainly to their supportive policies and investments in STI sectors, which have enabled them to establish a competitive edge among the top world economies.

However, many countries in the Global South have not advanced steadily despite their huge natural resources, mainly due to less supportive policies and a lack of focus and investment in STI capacity building. It is evident that those countries must build their scientific and technological competitiveness to begin the journey towards sustainable economic growth. The region can achieve global competitiveness only if it promotes and produces qualified human resources and a STEM workforce to respond to the global challenges of water, climate change, energy and food security for future generations.

ECOSF believes that there is a need to increase efforts to build a strong Science and Technology (S&T) base in the ECO region. As such, the Foundation is proud to partner



The capacity building workshop, Astana, Kazakhstan, held in 2015



ECOSF and KISTEP, Korea co-organized the 3rd Asian Innovation Forum in Seoul, South Korea on August 29, 2017. The Forum provided a platform to seek new possibilities by bringing together innovation leaders, policy makers, researchers and STI programme developers to share knowledge and experiences in science, technology and innovation in the Asian region. During the Forum, ECOSF organized a session on Green Innovation for a Sustainable Future to highlight and explore sustainable energy technologies for inclusive and sustainable growth in Asia. The session brought together expert panellists from diverse backgrounds to discuss the role of governments, academia and businesses in promoting a clean and renewable energy industry in Asia to achieve a sustainable future

with many of the most reputable development organizations including the Islamic Development Bank (IsDB); International Science, Technology and Innovation Centre for South-South Cooperation under the auspices of UNESCO (ISTIC), Kuala Lumpur, Malaysia; the European Union; UNESCO; Korea Institute of Science and Technology Evaluation and Planning (KISTEP); International Science and Technology Centre (ISTC), Astana, Kazakhstan; *La main à la pâte* Foundation, France; Ev-K2-CNR Foundation, Italy; Turkic World Educational and Scientific Cooperation Organization (TWESCO), Astana; Isfahan Science & Technology Town (ISTT) of Iran; Federation of Engineering Institutes of Asia and the Pacific (FEIAP), Malaysia; and many other national and international organizations.

ECOSF is especially proud to share a collaborating platform with IsDB on a number of projects, including the promotion of Inquiry Based Science Education (IBSE) in the ECO region and IsDB's Reverse Linkage programme, to build the capacity of partnering ECO member states through the transfer of technology and the sharing of best practice.

The Foundation is an accredited observer/stakeholder of the Intergovernmental Science Policy Platform for Biodiversity and Ecosystem Services (IPBES) based in Bonn, Germany and a founder member of the Asian STI Think

Tanks Network (ASTN) and the Asian Innovation Forums in South Korea. Together with KISTEP, ECOSF co-organized the 3rd Asian Innovation Forum in Seoul in August 2017, bringing experts from the ECO region and beyond to disseminate best practice and the latest trends in green innovation technologies for the sustainable future as well as the implications of the fourth industrial revolution.

The Foundation has been making great efforts to boost the exchange of scientists in and out of the ECO region, as well as further afield, for participation in various scientific and technological activities. The Foundation has also been facilitating the collaboration and cooperation between a number of leading institutions of its member states; has established a partnership with the Mustafa Prize for Science and Technology in the Islamic World with its secretariat established in Iran; and established collaboration with the Secretariat for the Advancement of Science and Technology in the Islamic World (SASTIW), based in Tehran, for enhancing cooperation between scientists and scholars in the ECO region. The Foundation also actively contributes towards the promotion of the UNESCO Man and the Biosphere Programme (MAB), as well as research and monitoring of trans-boundary movement of species and diseases in the ECO region.



The capacity building programme on Inquiry Based Science Education in the ECO region was launched by ECOSF with a capacity building workshop in Astana, Kazakhstan, in June 2015, in partnership with the Ministry of Education and Science, Republic of Kazakhstan. The workshop was held in collaboration with La main à la pâte Foundation France; the Embassy of France in Kazakhstan; the International Science, Technology and Innovation Center for South-South Cooperation under the auspices of UNESCO (ISTIC), Kuala Lumpur; the Islamic Development Bank; and the Inter-Academy Partnership Science Education Programme. The event brought together a number of science policy makers, teachers, students and global IBSE leaders from across the world

ECOSF has undertaken several initiatives to achieve its goals, exemplifying the best practices of South-South and Triangular Cooperation, some of which are outlined below.

Inquiry Based Science Education in the ECO region

Inquiry Based Science Education (IBSE) adopts an investigative approach to teaching and learning. It is recognised as an effective tool for catalysing STEM education with a methodology that develops and strengthens students' skills of observation, questioning, planning, conducting investigations, and reviewing evidence in the light of current knowledge, thereafter drawing conclusions and communicating results. The methodology has been recognised with significantly positive results worldwide under the umbrella of the Inter-Academy Partnership Science Education Programme (IAP SEP). IAP is a network of over 130 national

academies of science, engineering and medicine. It has been proved that IBSE methodology produces rational citizens, critical thinkers, innovators and scientists of the future.

Realising its significant potential and impact on the future generation of IBSE methodology, ECOSF is in collaboration with *La main à la pâte* Foundation under the auspice of the Academy of Sciences of France; the International Science, Technology and Innovation Center for South-South Cooperation under the auspice of UNESCO (ISTIC), Kuala Lumpur; the IAP-SEP and IsDB, to implement its capacity building programme to promote IBSE at schools in the ECO Region. ECOSF launched this programme in 2015 from Astana, Kazakhstan as one of its flagship projects in the region.

The Foundation has since launched IBSE programmes in Iran and Pakistan to strengthen the science base for

advanced S&T research and higher education. ECOSF plans to launch the IBSE programme in other ECO member states in the future in collaboration with national ministries and international partners. This is perhaps one of the working models of the Triangular Cooperation mechanism in the promotion of science education, whereby ECOSF introduces teaching strategy and best practice, developed and implemented in the North (France), and extends it to the Global South in collaboration with ISTIC and IAP SEP.

ECOSF contributes towards the Fusion of Civilisations curriculum

A large part of the world is in constant turmoil and chaos due to terrorism, religious extremism, violence, genocide and massive population dislocation, often perpetuated by well educated people of every colour and creed. Advancement in STI alone cannot solve this complex challenge, unless moral, social and ethical values are incorporated into the school curriculum. To address this global challenge, a curriculum is required that enables children to learn morality and a code of social conduct at an early stage and build a profound understanding that all human beings are the same under the skin. Such a curriculum will help promote global peace and produce rational citizens with a sense of ownership and the desire to live in coexistence and harmony. As such, ECOSF is contributing towards the development of a Fusion of Civilisation curriculum in collaboration with IAP-SEP; the China Association of Children's Science Instructors (CACSI); the China Association of Science and Technology (CAST); and the Children and Youth Science Center (CYSC) of CAST; all under the umbrella of China's One Belt One Road initiative.

The idea is to bring together learned historians of S&T and curriculum design experts from Europe, China, the Islamic world, Africa, Central Asia and India to discuss the outstanding developments in their own civilisations and work together to translate such discoveries into local school curriculum material. The core objective is to foster peace at the start of a child's education by employing an IBSE approach among countries that share the common heritage of the ancient Silk Road.

Engineering Qualification Standardisation, Accreditation and Professional System (EQSAPS)

Engineers play a lead role in ensuring sustainable development by enhancing efficiency in the use of data, energy and natural resources as well as by improving transport systems and health. Engineers can benefit from gaining work experience in different countries, however, the host country often does not recognise foreign qualifications. Realising the need



ECOSF is partnering with UNESCO, FEIAP and AETDEW based in Malaysia to assist those ECO economies lacking national accreditation bodies, and to develop the standards of engineering qualifications in member states, particularly in Central Asia. This initiative is focused mainly on South-South Cooperation and aimed at harmonisation and standardisation of the engineering curricula. The picture shows the programme's launch during the International High Level Policy Forum and Workshop on Developing the Roadmap on Engineering Qualification Standardization, Accreditation and Professional System, held in Dushanbe, Tajikistan, April 2017

for standardisation of engineering qualifications in Central Asia, ECOSF is partnering with UNESCO, the Federation of Engineering Institutions of Asia and the Pacific (FEIAP), and the Academy of Engineering and Technology of the Developing World (AETDEW) based in Malaysia. Under the programme, ECOSF is assisting the ECO economies, particularly those which lack a national accreditation body, to improve and develop the standards of engineering qualifications in those member states, particularly in Central Asia, with a launch in Tajikistan. This initiative, focused mainly on South-South Cooperation, is aimed at the harmonisation and standardisation of engineering curricula within the region in line with the FEIAP qualification guidelines.

The ECOSF Science and Technology fund to promote applied research in the ECO region's key development areas

Generating knowledge and transforming it into innovative solutions is a crucial factor in maintaining and enhancing the competitiveness in the S&T-based global market. Innovation and excellence will positively impact our lives in very different ways, such as providing more efficient and sustainable energy resources, new technological solutions to protect the environment, and guaranteeing the security of water and food resources for the world. ECOSF has established an S&T fund to support applied research projects of a strategic and commercial value to contribute to the economic development of the region in line with ECO Vision 2025 and the UN SDGs. The fund provides competitive resources to outstanding researchers of ECO member countries working in the ECOSF priority research areas of energy, water, food security and climate change.

Technology transfer and research and development in halal product authentication in Kuwait

Adnan Husain, Food and Nutrition Programme Manager, Environment and Life Sciences Research Centre (ELSRC), Kuwait Institute for Scientific Research (KISR); Talat Saeed, Research Scientist, ELSRC, KISR; Hani Al-Mazeedi, Associate Research Scientist, ELSRC, KISR; Wajih Sawaya, Senior Advisor, Director General Office, KISR

he halal market gross value is estimated at approximately US\$2 trillion worldwide, and is gaining momentum with an expected value of around US\$3 trillion by the end of 2022. Halal in the Arabic language means permissible according to the Islamic Shariah. The halal market is not limited to food and foodrelated products but also includes non-food products such as pharmaceuticals, cosmetics, health products, toiletries, medical supplies and services including finance.

Food, cosmetics, pharmaceuticals and healthcare products are consumed and used daily by Muslims. However, the halal status of these products is questionable concerning the source of the ingredients used as well as the manufacturing, storing and distribution processes.

A very limited number of methods are available to detect non-halal ingredients and products in food, cosmetics, pharmaceuticals and healthcare. The development of various new techniques to detect and quantify non-halal components is in great demand and thus, sustainable joint research and development activities must be initiated to develop reliable methods of detection of these non-halal ingredients.

Among the issues that are often raised about products and services are the lack of suitable compliant alternatives in food, cosmetics, pharmaceuticals and healthcare ingredients and products; the relative lack of robust scientific analytical and non-analytical methods in detection and authentication of products that will adequately address issues on fraud and adulteration; the lack of regional and global harmonisation in guidelines and standards; the lack of initiatives in product development and innovation; and the interpretation of scientific findings for practical applications in a modern industrial environment. Any research and development initiative must be closely linked to the product supply chain, as the primary objective of any research endeavour must be to provide solutions to problems and issues that arise in the supply chain.

The halal industry in Kuwait

Kuwait prohibits the importation of alcohol and pork products, while all imported beef and poultry products must have a health certificate issued by the country of origin and a halal food certificate issued by an approved certifying authority in that country, which is recognised by the Kuwaiti Municipality.

Kuwait plans to adopt additional controls for halal certification, which should be in line with the Gulf Cooperation Council (GCC) Standardization Organization guiding principles. Therefore, there is an urgent need to develop and coordinate manufacturing, and quality assurance of halal products and, above all, an authentic halal certification. Halal product manufacturers need to maintain and guarantee the integrity of their halal chains.

The Public Authority for Industry in Kuwait is responsible for authentication of all imported products to ensure compliance with GCC and/or Kuwait standards. However, the Public Authority for Industry laboratories is not equipped to carry out halal authentication of those products. The Food and Nutrition Authority carries out food analysis mostly for safety aspects but, to a very limited extent, the halal status of



Real-time testing using polymerase chain reaction (PCR)



Kuwait Institute for Scientific Research, main building

food materials. Pharmaceutical and personal care products are not examined for halal status. As there are numerous sources of these products and ingredients, without the capacity of authentication, it is difficult to ensure the halal status of the products available in the country.

The development of the halal industry in Kuwait requires a constant strengthening of the capacity to cover requirements for halal integrity that includes awareness, certification and audit, product choice, packaging, labelling, marketing and branding. Training must be provided to the public as well as to industries on the fundamentals of halal products, covering basic principles and industry practices.

Situational analysis and capacity gaps

The Kuwait Institute for Scientific Research (KISR) is a pioneering, independent, national institute of scientific excellence. KISR's programme of research has been built to serve the objectives of the institute which are aligned with Kuwait's national priorities. The core research programmes

are built around energy, food resources, natural resources, water resources, and environmental and economic studies. KISR currently runs more than 120 research laboratories, and has recently acquired several instruments needed for halal authentication testing activities such as liquid chromatography mass spectrometry (LCMS), gas chromatography mass spectrometry (GCMS), and real-time polymerase chain reaction (PCR).

Several staff members have experience in using the instruments, although they are not specialised in halal authentication activities and require technical training to meet competence and quality requirements to ensure the establishment of sustainable professional capabilities in the authentication testing.

Currently, there are no halal methods established at KISR to carry out authenticity tests. Therefore, reliable methods for the detection of lard, alcohol, porcine DNA and proteins must be established at KISR to verify the halal status of these products for Kuwait and other GCC countries.

Diagnostic and validation mission

Upon the request of the government of the State of Kuwait, a combined diagnostic and validation mission was launched to engage in a peer-to-peer consultation process between experts from the International Centre for Chemical and Biological Sciences (ICCBS) at the University of Karachi, Pakistan, and the KISR, facilitated by the Islamic Development Bank (IsDB).

The mission was able to ascertain the capacity gaps in halal product authentication and managed to fine-tune the project design, confirm the financing plan, and examine the implementation as well as the disbursement arrangements resulting in a joint formulation of an action plan, which was thoroughly reviewed by KISR, IsDB and ICCBS.

The Reverse Linkage project

The overall project objective is to develop the capacity of KISR to carry out halal authentication services as well as research and development in the field, utilising ICCBS expertise.

Approach

To achieve the project objective, a Reverse Linkage (RL) approach has been adopted with the following scheme:

- ICCBS will be the provider of expertise and training in halal product authentication testing methods
- KISR will be the recipient of the expertise. It will contribute financially to the project in addition to its in-kind support through the facilitation of logistic arrangements in the country
- IsDB will continue its connector and catalytic role, facilitating project implementation by providing financial support, project management and technical oversight.

Main activities

- Establishment of halal authentication laboratory at KISR
- Developing a critical mass of skilled professionals and researchers at KISR for carrying out halal authentication tests on food and non-food products
- Initiating two joint projects between ICCBS and KISR in halal research, involving key personnel from both institutions in the field of chemical and biological testing methods with improved sensitivity and specificity
- Assisting KISR in obtaining ISO 17025 accreditation for the halal testing laboratory.

Project duration

The project will run for two years, from 2017 to 2019.

Project management

A joint coordination committee composed of representatives from the ICCBS, KISR and IsDB will be established. It



The new gas chromatography mass spectrometry unit at KISR

will meet every six months to review the progress, compare results and propose corrective actions if needed.

Knowledge management

Lessons learnt from the implementation will be captured by interviewing the project team members, and direct beneficiaries such as the researchers who are being trained during the project. Partners' views and perspectives on the RL modality, its benefits, advantages, and disadvantages, and lessons for the future will be documented during periodic reviews of the joint coordination committee.

Results will also be captured and disseminated in a consumable format through human stories to reflect the difference this project is making to the lives of direct and indirect beneficiaries. The lessons learned will also be shared with internal stakeholders to compare best practices and provide an opportunity for collective learning and improving future project design and implementation.

Project benefit

Upon project completion, a fully operational facility at KISR will be capable of carrying out halal authentication as well as research and development, contributing to the advancement of the detection of non-halal ingredients in food and non-food products in Kuwait and other GCC countries.

Publications and intellectual property generated in the project will be beneficial to both ICCBS and KISR and will be jointly shared and owned. This an opportunity for IsDB in the promotion of human resources development in member countries and institutions through RL modality.

Innovations in public service delivery — the view from Azerbaijan

Zaka Muradov, Senior Adviser, International Relations Department, The State Agency for Public Service and Social Innovations under the President of the Republic of Azerbaijan

he public sector is the largest service provider in almost all societies, and any changes to it – whether positive or negative – have an immediate impact on a national scale, affecting the well-being of millions of people. Public sector performance is measured by the efficiency of public service delivery.

The introduction of the concept of New Public Management has changed the philosophy behind public service delivery. Borrowing management approaches and techniques from the private sector which put the customer, in this case the citizen, at the centre of the entire business process, public administrations around the world are increasingly opting for citizen-centric and citizen-operated models to ensure efficient delivery of public services. One-stop models of public service delivery have emerged as a result of the quest for better optimisation, simplification and alignment of public services with citizens' needs and expectations.

For the last decade, Azerbaijan has made great strides in reforming all sectors of public socio-economic life, resulting in public administration, including public service delivery, being among the most visible achievements areas.



An ASAN service centre, a new approach to the provision of public services



ASAN Service establishing high quality public service ethics

The establishment, in 2012, of the Azerbaijani Service and Assessment Network (ASAN) – the word 'asan' means 'easy' in Azerbaijani – is the success story of ongoing modernisation. With this milestone resolution, Azerbaijan entered into a new phase of public governance development. ASAN service centres employ a one-stop-shop principle by providing more than 250 services from 10 state entities and around 30 private companies. The model, branded ASAN xidmet, thus embodies a successful example of a public-private partnership.

ASAN Service is a government organization subordinated to the State Agency for Public Service and Social Innovations, established by a Presidential decree in July 2012 with the aim of ensuring advanced public services and offering citizens fast access to public services, while increasing the efficiency and transparency of those services.

The most important goal of the ASAN initiative is to enhance public amenity by streamlining access to public services and providing high customer service standards. There is also a strong desire to develop the professional skills of civil servants and to bring innovation to public administrative tasks in order to strengthen confidence in state structures.

Behind these objectives there is a strong commitment to transparency, demonstrated by reliable ethical behaviour in dealing with all cases and clients. ASAN Service has therefore established a corruption-free environment and a high-level of confidence towards state structures.

The 12 ASAN service centres operating so far in Azerbaijan (five in Baku and six in outer regions) offer more than 250 services. The centres are open ten hours per day during the week and seven hours per day at weekends. Citizens' applications are dealt with by representatives of relevant state entities.

The innovative and unique aspect of ASAN Service is that citizens have everything at their disposal, with various public services gathered together in a single place, managed by the State Agency, and where various state entities are directly responsible for providing their own services. Ten state entities are responsible for delivering the services including The Ministry of Justice, Ministry of Internal Affairs, Ministry of Taxes, State Committee of Property Issues, and the State Customs Committee.

Throughout this mandated and innovative approach to delivering services to all residents around the country

through physical centres and mobile buses, ASAN Service has created a system, which averts corruption, red tape and impropriety, resulting in very high customer satisfaction.

Winning first place in the United Nations Public Service Award, in the category: Improving the Delivery of Public Services, ASAN Service enjoys worldwide recognition, and has become a brand through which Azerbaijan promotes the principles of efficiency, transparency, accessibility and citizen's comfort in public service delivery based on innovation and modernisation, and building solid partnerships with like-minded countries. Following the adoption of the United Nations Agenda 2030 for Sustainable Development, the importance of international cooperation in replicating best practice by other countries has risen greatly.

In pursuit of this goal, the Azerbaijan State Agency is constantly establishing new ties with like-minded nations and is ready to transfer its expertise and know-how in the field of public service delivery to partner countries. For example, the State Agency for Public Service and Social Innovations, under the President of the Republic of Azerbaijan, together with the Ministry of Finance of the Islamic Republic of Afghanistan, signed a Memorandum of Understanding (MoU) on July 12, 2016 in Kabul, on cooperation to establish an advanced public service delivery mechanism based on the ASAN service model.

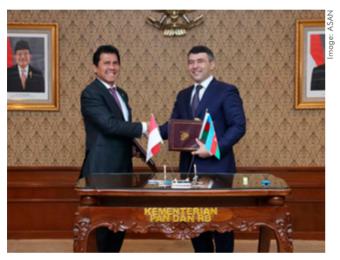
The signing ceremony, held in the Afghanistan President's palace, was attended by Afghan ministers, members of parliament and other senior officials. At the press conference, Mr. Inam Karimov, Chairman of the Azerbaijan State Agency, spoke about the friendly relations and partnership between the two countries in all areas. He also provided detailed information about the recent reforms initiated by the Azerbaijan president, Ilham Aliyev, in the field of public administration and public service delivery and highlighted the activities of the ASAN Service establishment as part of these reforms. Mr. Eklil Hakimi, Afghanistan's Minister of Finance, expressed his satisfaction with his country's choice of Azerbaijan's model for modernising public service



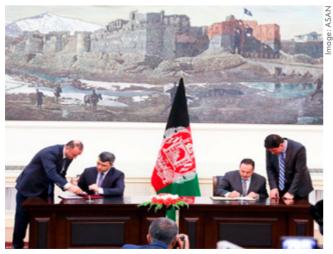
The new ASAN Khedmat building in Afghanistan



Mr. Inam Karimov, Chairman of the Azerbaijan State Agency with Dr. Abdulaziz Othman Altwaijri, Director General of the Islamic Educational, Scientific and Cultural Organization (ISESCO)



Mr. Inam Karimov with Indonesia's Minister of Administrative and Bureaucratic Reform, Asman Abnur



Mr. Karimov with Mr. Hakimi

delivery, and voiced his confidence about its successful application in the coming years.

One of the most resent achievements was to sign an MoU between the Azerbaijan State Agency and the Republic of Indonesia's Ministry of Administrative and Bureaucratic Reform on cooperation in advanced public service delivery. This document has further strengthened ties between the two countries, as it resolves to promote public service delivery cooperation as one of the leading areas of public administration and highlights the crucial importance of transparent, efficient and citizen-oriented public service delivery for creating a favourable environment for achieving sustainable development in all areas, including political, economic and social.

Azerbaijan values its relationship with Islamic countries and thus, on 10th November 2017, the State Agency signed an MoU with the Islamic Educational, Scientific and Cultural Organization (ISESCO) in Rabat, Morocco. The agreement aims to develop the delivery of public services in member states in the fashion of Azerbaijan's recognised ASAN xidment model. The MoU also sets the agenda for the implementation of many projects and programmes for member states in the coming years.

Another State Agency initiative, the Azerbaijan Innovation Export Consortium (AZINNEX), was created as a key tool for developing entrepreneurship in addressing Azerbaijan's development strategy, reinforcing international export opportunities, and introducing Azerbaijan's innovative products to international markets. AZINNEX incorporates ten Azerbaijani companies, all specialised in innovation, to coordinate activity and increase the effectiveness of the business environment and its support in investment and business activity. The organization plays a crucial role in improving the standing of Azerbaijan internationally, creating intellectual, innovative and competitive potential, boosting export opportunities, and integrating the ASAN Service experience and Azerbaijan's intellectual properties into international markets. The alliance protects the interests of companies included into the consortium and represents them in international markets.

The State Agency also organizes study tours for delegations from various countries such as Afghanistan, Egypt, Djibouti, Iran, Kazakhstan, Morocco, Sudan, Turkey, and Uzbekistan to introduce them to Azerbaijani best practice in the sphere of public service delivery and to discuss opportunities to deepen relations. The Agency is convinced that cooperation in the improvement of public service delivery will contribute to the people of those countries the capacity to enjoy a more transparent, efficient and citizen-friendly service delivery mechanism.

International Islamic University Malaysia: fostering cooperation through Reverse Linkage

Prof. Dato' Sri Dr. Zaleha Kamarudin, Rector; Prof. Dr. Abdul Rashid Moten, Guest Writer; International Islamic University Malaysia (IIUM)

he growing number of threats to human security has made it absolutely essential to understand, increase and apply knowledge from various disciplines in the pursuit of peace by creating positive social conditions which minimise destructive conflicts and promote human well-being. The International Islamic University Malaysia (IIUM) has been in the forefront of fostering cooperation through promoting exchanges of knowledge, skills, resources and technical know-how to develop capacity and improve people's lives. The university has established many institutes and centres and organised many seminars and workshops to address some of these enduring and intractable problems, focusing specifically on issues of natural disaster, coercion, and leadership in promoting peace and conflict within and between societies and contributing to the development of efforts to build peaceful and equitable forms of social coexistence.

The IIUM operates on a model of research, knowledge dissemination, and skills development as tools for economic development and peace. IIUM students are not merely concerned about finding a career after graduation but also with big questions regarding one's calling and duties to others. IIUM uses technology to meet educational objectives,



International Islamic University Malaysia

foster active engagement of students in community building, develop civic competence, and further career aspirations. IIUM's efforts in this respect have been well recognised at home and abroad, with approximately 25,620 students from approximately 100 countries. As of the 33rd convocation ceremony of IIUM held in November 2017, the university has produced 85,854 graduates and postgraduates of whom 73,677 were Malaysians and 12,177 international students.

The university has been emphasizing the need to partake of the international network of intellectuals and civil society groups and thus to play a constructive role in establishing mutual understanding and promoting civilizational dialogue for the purpose of ameliorating global problems. To this end, the university has forged alliances with several groups and established various centres and institutes.

To promote peace, in 2006 the university established cordial relations with Perdana Global Peace Foundation (PGPF) which has its roots in the Perdana Global Peace Organization (PGPO), a non-governmental organization which envisages a serious, active and sustained struggle against war and for peace.

IIUM has also been in the forefront of promoting interfaith harmony and tolerance, implementing the UN resolution adopted in September 2010 which affirmed that mutual understanding and interreligious dialogue is an important dimension of a culture of peace, and proclaimed the first week of February every year to be observed as World Interfaith Harmony Week. The university has been organizing seminars since 2012 to spread the message of harmony and tolerance among people of different faiths. It has collaborated with the United Nations' initiative for interfaith harmony and tolerance; the Department of National Unity; Prime Minister Department, Malaysia; Ma'din Academy, India, and other organizations to initiate historic meetings, conferences and dialogue. In 2013, IIUM organized the International Seminar on Interfaith Harmony and Tolerance along with an award ceremony. The Rector of IIUM pointed out that the World Interfaith



International Seminar on Interfaith Harmony and Tolerance award ceremony 2013

Harmony Week is not a call to abandon one's faith but a call to respect differences between followers of different religions and to be aware that mutual understanding and dialogue constitute important dimensions of a culture of peace. The seminar had two sessions discussing the worrying trends of unabated acts of violence and terrorism in the name of religion, and the prospect for harmony discussed by media specialists. The seminar concluded that peace in the world can be attained by bridging the gulf between religions, societies, individuals and communities. This requires dialogue, interaction and intermingling of individuals and groups at national and international levels. The then UN Secretary-General, Ban Ki-Moon, stressed in his message the need for religious and cultural leaders to speak the language of tolerance and respect.

In 2012, Dr. Zaleha Kamaruddin, Rector of IIUM, addressed the UN General Assembly Thematic Debate on the State of the World Economy. This was followed by the establishment of IIUM's International Centre for Alliance of Civilisations (INTAC) at its Jalan Duta campus. Through INTAC, the university serves as a rich resource and an energetic partner to the United Nations Alliance of Civilizations

(UNAOC) in its outreach to various communities and institutions in south east Asia and the ASEAN region. In 2015, INTAC joined the Serendib Institute of Research and Development and organized 9-day long interfaith and intrafaith dialogues in Sri Lanka. One of the objectives was to foster a more harmonious, stable and sustainable coexistence between the Muslim minority community and the Buddhist majority and other non-Muslim communities of Sri Lanka.

Another organization promoting peace is the International Institute of Wasatiyyah (IIW) or Moderation, established at the IIUM in January 2013. IIUM President, Mohd. Sidek Hj. Hassan, officiated at the inauguration and reminded the audience of the need to restore civility in the international arena and to promote interfaith goodwill and understanding. He declared that: "Our strength is in our diversity, so let us not tolerate extremist views and sectarianism or militancy and radicalism that will only serve to destroy this social fabric." He argued that IIUM, an institution that celebrates the pursuit and expansion of knowledge, should seize the advantage of its academia which claims the higher ground in being a neutral party to push the agenda of moderation for the country and for Islam. The Institute has organized



IIUM World Prosumer Convention 2017

several conferences and workshops to promote the cause of peace enjoined by Islam.

With co-sponsorship by the Islamic Development Bank (IsDB), the International Islamic University of Malaysia organised the 1st IIUM World Prosumer Convention (IWPC) in Kuala Lumpur in August 2017, with the theme of Translating Innovation to Wealth. The biennial convention is for researchers, scholars, industries and innovators from all over the world to address 21st century opportunities and challenges through various conferences, prototype competitions, forums, exhibitions and industry matching. The message from the Malaysian Minister of Higher Education described the IsDB-IIUM co-sponsored event as in line with the country's efforts in realising the Malaysian government's plans for having a fully developed economy by the year 2020. Conventions like these provide the proper grounds to bring together academia, civil society, industry, and the government to move the country forward. IIUM Rector, Dr Zaleha Kamarudin, assured the audience of the university's commitment in discovering innovative ways to upgrade the quality of life for mankind and stated that: "By sharing knowledge, cooperating and supporting each other, we can all achieve more, and together we will prosper." The first IWPC has brought in around 1,000 international presenters and participants from around the world to attend 42 different activities on technology transfer in the Muslim world, including advances in manufacturing and materials engineering as well as achievements in mathematical applications and mechatronics engineering.

In 2017, IsDB's regional office in Kuala Lumpur, Malaysia facilitated academic cooperation between IIUM and Libya's Islamic University of Al Saied Mohamad Bin Ali Al Sanussi (IUS). Faculty members from IUS identified grounds for academic cooperation and capacity building in various fields including in Islamic banking and finance.

Disturbed by death, destruction and the suffering of displaced persons, refugee children, elderly people and women, IIUM took the lead to pool together Muslim women across the globe in a programme entitled World Muslim Women Summit and Exhibition 2016 (WISE) where Muslim women from all walks of life came together to think, feel and act together towards progress and peacebuilding. This was the first ever such event and was held in September 2016 at PWTC, Kuala Lumpur. It was a global level event with a conference, NGO meetings, youth forum and an exhibition on Muslim women's entrepreneurial and creative achievements. The Summit was co-organized with the Department of Islamic Development Malaysia (JAKIM), the Organization of Islamic Cooperation (OIC), the Department of Women's Development (Jabatan Pembangunan Wanita) Malaysia, and the World Islamic Forum (WIF). There were also other strategic partners: TASAM and Turkcell from Turkey, and the Putra World Trade Centre, the OIC International Business Centre, and others from Malaysia.

The objectives of WISE 2016 were, among others, to address the global challenges of peacebuilding by focusing on the special contributions of Muslim women and to encourage young women leaders to address contemporary critical and challenging peacebuilding issues from religious, social, political, cultural, economic and legal perspectives.

The Summit was a multi-faceted event including an International Conference which deliberated on Muslim women's roles, works and contributions in the field of peacebuilding. Also discussed were the roles of the OIC and other Muslim organizations in supporting Muslim women's efforts in peacebuilding. The Summit also had World Muslim Women NGOs meeting which brought together more than 200 participants from Muslim countries and Muslim minority countries to share their experiences of war, conflict, and post-war situations with the ultimate aim of working towards peace.



The First International Islamic Initiatives on Peacebuilding 2017



World Muslim Women Summit and Exhibition 2016

It was also a platform for Muslim women to showcase their artistic and cultural creativity as well as their entrepreneurial skills. The festival began with a Walk-for-Peace event with about 2,000 participants. Among the highlights of the festival was the International Exhibition which showcased products that appeal to modern Muslim women and provided a platform for a comprehensive, integrated women's wellness programme.

The Summit urged all relevant institutions and parties to act now in order to create real opportunities for women, build integrated value-based education for women's empowerment, and to maximise women's participation in economic and political development across Islamic communities. It also urged the relevant authorities to widen the role of Muslim women as scientists, decision makers, civil society builders and peacebuilders at local, regional and international levels. Additionally, the Summit witnessed the launch of 100 scholarships under the OIC-Malaysia Academic Support Programme for young Muslim women from conflict zones and war-torn countries to study in Malaysia. These scholarships are worth more than MYR15 million and were fully sponsored by Malaysian public universities.

The university also organized the First International Islamic Initiatives on Peacebuilding 2017 to improve

psychosocial well-being and mental healthcare for women and children in conflict zones through improving both the policy and the practice. This was a form of collaboration and partnership between inter-governmental, academic and civil society organizations. It produced evidence-based recommendations for the improvement of policies concerning humanitarian aid and intervention programmes for the victims of conflicts. The initiative highlighted the status of the psychological health of women and children in conflict-ridden regions – Syria, Palestine, Iraq, Sudan, Myanmar and Yemen – and urged all organizations including OIC and other Islamic Relief and affiliated institutions to protect women and children's rights in conflict regions.

In summary, the International Islamic University Malaysia, established in 1983, has been striving to foster South-South Cooperation through Reverse Linkage and capacity development interventions. The university has established several institutes and centres to promote peace, and has organized several conferences and seminars to exchange knowledge, expertise and resources to help development and to promote peace. It has also collaborated with IsDB, the United Nations and other regional and international organizations to share respective resources to ameliorate the sufferings of the victims of war and conflict and to make the world a better place for all.

Jordan's evolving landscape in development cooperation

Zeina Toukan, Director, International Cooperation Department, Ministry of Planning and International Cooperation, Hashemite Kingdom of Jordan

In spite of being a lower middle-income country, Jordan has, for years, succeeded in setting a regional model for multi-faceted home-grown reforms leveraging its experience in the bold reform measures undertaken by the Kingdom on political, social and economic fronts in line with its successive national visions; the most recent of which is the country's ten-year socio-economic blueprint, Jordan 2025: A National Vision and Strategy.

In recent years, Jordan has been setting a regional and global standard in terms of dealing with the Syrian refugee crisis and doing global public good. This is in addition to pioneering resilience-based approaches with the development of the three-year rolling Jordan Response Plans and managing a paradigm shift through the Jordan Compact adopted in February 2016, which has allowed Jordan and its international partners to make significant strides in supporting and building the capacities of Syrian refugees and hosting communities, in addition to supporting Jordan's overall development agenda.



Visiting delegation from the Singapore Civil Service College to the King Abdullah II Center for Excellence (KACE), Jordan

The story of Jordan is one of turning challenges into opportunities. Even as unprecedented challenges to economic and fiscal stability have appeared, they have not diverted the Kingdom from the road of continued development and reform. Jordan's approach to reform and development has always been, and will continue to be inclusive and sustainable.

Jordan has also served as a platform for contributing to the rebuilding and stabilisation efforts in the region and across the wider Middle East and North Africa (MENA). This is thanks to its long-term history of change, development and transformation driven by upgrading the country's institutions, capabilities and capacities at various levels and fronts. Moreover, Jordan has been able to position itself as a regional leader in human resources development and in institutionalising and promoting principles of excellence, innovation and competitiveness across the public and private sectors as well as civil society organizations.

Leveraging its strengths, Jordan has been a forerunner in engaging with partners from both the North and the Global South, and has introduced many tools and solutions to promote South-South and Triangular Cooperation through the provision of experts and the transfer of technical know-how and skills to other countries in the region, whether conflict-ridden, resource-scarce, or even high income neighbours.

Institutional capacity building and home-grown public sector reform have been at the heart of Jordan's political and economic progress. First-hand experience with these reforms has equipped Jordan with valuable know-how and expertise that can shared with other countries in the region and, potentially, the entire Global South.

In this context and over the past decade, Jordan has partnered with the Islamic Development Bank (IsDB), and the Office of Technical Cooperation, with the aim of promoting South-South and Triangular Cooperation with other IsDB member countries, particularly in the Arab region. This cooperation has cultivated itself in various forms and has contributed to institutional capacity building, peer-to-peer exchanges, training, and knowledge transfer, building on Jordan's vast experience in areas such as human resources management, structuring a civil service, social development,



KACE welcomes the Ministry of Public Planning and Utilities of Sudan to a training programme

creation of development zones, energy and water resources, education, and excellence awards in the public sector.

As part of the ongoing cooperation with IsDB, the Jordanian Civil Service Bureau has provided training to the Yemeni Ministry of Civil Service in areas related to the restructuring of the public sector and in the management of human resources. Support and training was also extended to the Ministry of Education and Higher Education in Morocco focusing on learning from the Jordanian experience in the implementation of educational reform projects as well as in mobilising donors' resources for facilitating education strategies and projects.

As Jordan's is among the first in the region to set a special economic zone, experts from the Aqaba Special Economic Zone Authority, a world-class business hub that brings together public and private expertise, were seconded to Mauritania to assist in upgrading and building the capacity of the Free Zone Authority and to share best practices.

In cooperation with IsDB's technical arm, training conducted by the Royal Jordanian Geographic Centre was given to the Somalian Ministry of Energy and Water Resources on remote sensing and the development of geographic information systems.

Another example is the support extended through the King Abdullah II Center for Excellence (KACE), a state-of-the-art institution aimed at promoting the culture of excellence in Jordan and the region through developing excellence frameworks and assessment criteria based on international best practices, assessing organizations' performance, managing the King Abdullah II awards for

excellence and promoting excellence among public, private, business association, educational services providers and non-governmental institutions .

KACE's credentials for promoting performance excellence were shared with Saudi Arabia in 2011, with KACE assisting the Kingdom in integrating knowledge into the Al-Taif Award for Outstanding Performance, in addition to passing this experience to other peer institutions within a number of countries in the region.

Under the Third Country Training Program (TCTP) scheme, the Government of Jordan has collaborated with the Japan International Cooperation Agency and provided a large number of technical training programmes with the purpose of transferring and sharing development experience, knowledge and technology to neighbouring countries and others in the Arab region, namely, Palestine, Iraq, Yemen and Sudan. A large number of training programmes have been conducted in the of fields of water, electricity, information and communications technology, reproductive health, judicial and legal reforms, police and public security, agriculture and statistics. Over 2,000 participants have been trained since 2013. Under this type of cooperation, the Government of Jordan was able to contribute to capacity and institutional stability in both Iraq and Palestine.

Furthermore, Jordan has always been keen to strengthen its South-South ties and relationships through the conclusion of cultural and scientific executive programmes with a large number of countries aimed at promoting cooperation and the exchange of expertise in education, higher education, research and innovation, among others.

Showcasing Jordan's knowledge economy

Beyond Triangular Cooperation, Jordan has embraced direct South-South Cooperation (SSC) as a means of contributing to the sustainable development and capacity building efforts of its regional and even its global counterparts. For the past two decades, Jordan has successfully positioned itself as the region's hub for knowledge, IT, education and higher education, research and innovation, and health. It showcased this success by exporting development know-how and talented, skilled human resources to other countries in the MENA region and to Gulf Cooperation Council countries by concluding Memoranda of Understanding (MOUs) and running executive programmes.

Jordan and the Federal Republic of Somalia have signed an MOU encouraging open dialogue and exchange between universities and research centres. Beyond traditional capacity building, the MOU aims to prepare the ground for seconding experts from Jordan to assist with laying long-term sustainable development plans in Somalia, establishing a planning and statistical capacity building institute, and providing intensive, short-term courses. Jordan and Egypt concluded an MOU to establish technical cooperation in strategic planning and local development.

Sharing stability – South-South Cooperation in the form of post-conflict reconstruction

In a region of turmoil, conflict, and change, Jordan has displayed a formidable ability to remain peaceful and resilient. The country has never been able to afford to ignore the woes of its neighbours and so, almost inevitably, has invested in their peace, stability, and resilience as part of maintaining its own. Jordan's constant quest for reform, growth, and a competitive public sector has provided ample space and impetus for it to be a key partner in post-conflict reconstruction and stability-building, perhaps the most promising and valuable form of SSC. Over the course of the past 15 years, Jordan has shared its public sector reform with Iraq through providing continuous and unconditional



Training session at KACE



Visiting delegation to KACE from the Egyptian Central Agency for Organization and Administration

training support to Iraqi civil servants in key sectors and areas in preparation for embracing good governance in a remodelled state. Given the current political scene in the MENA and wider regions, Jordan is more than ready and willing to continue to expand these forms of cooperation, and actively supports the rebuilding and reconstruction efforts in post-conflict Iraq, Syria and Yemen.

Reversing the stall – the Sustainable Development Goals and South-South Cooperation

Jordan's steadfast commitment to the Sustainable Development Goals (SDGs) and the 2030 Agenda is creating space for enhanced cooperation with its partners from the Global South. Despite numerous challenges, Jordan embarked on implementing the 2030 Agenda and achieving the SDGs in hope of safeguarding the development strides and previous successes with the Millennial Development Goals. Accordingly, the Government of Jordan presented its first Voluntary National Review (VNR) on SDG progress at the High Level Political Forum in July 2017. Jordan has ranked fifth in the Arab world in terms of achieving the SDGs, obtaining the best performance results on the SDG 1 – poverty elimination – where no citizen earns less than \$1.9 per day. That said, the VNR highlighted challenges and stalled progress in achieving the SDGs.

The overall implementation of the SDGs is a fifteen year process, and the first VNR marks the infancy phase of implementation. And now, Jordan is ready to integrate SSC into its strategy for implementing the SDGs. The country not only serves as a global model for SDG progress, given its lower-middle income, resource scarce, and refugee-impacted economy, but also as a working model for sharing expertise with other developing countries.

The world can count on Jordan as an indispensable and growing development partner. Jordan remains keen to further cooperate with partners to explore new and promising terrains of SSC exchange experience, reforms and knowledge, to deliver on the promises of the future as well as contributing to building, stabilisation and reconstruction efforts.

Reporting SSC — lessons from Ibero-America

Martín Rivero Illa, Social Cohesion and South-South Cooperation Area Coordinator for the Ibero-American General Secretariat (SEGIB); Cristina Xalma, Lead Researcher for the Report on South-South Cooperation in Ibero-America (SEGIB), Silvia López, Researcher for the Report on South-South Cooperation in Ibero-America (SEGIB)

he Ibero-American General Secretariat (SEGIB) is an international, intergovernmental organisation that embraces the nineteen Spanish- and Portuguese-speaking countries of Latin America and the Caribbean (from Mexico to Chile, including Cuba and the Dominican Republic) and the three on the Iberian Peninsula (Andorra, Spain and Portugal). Since 2007, the SEGIB has been preparing the annual Report on South-South Cooperation (SSC) in Ibero-America, in accordance with the mandate of the Summit of Heads of State and Government held in the same year in Santiago de Chile.

This report systematises and analyses the South-South and Triangular Cooperation projects and actions that the Ibero-American countries implement in conjunction with each other and whose information is provided by the governments of the region. In addition, and for two years now, the Ibero-American countries have also been reporting data relating to the SSC they took part in together with countries from other developing regions. In this respect, and by way of example, the most recent 2017 report records Ibero-American country SSC projects and actions with 42 of the 57 member countries of the Islamic Development Bank.

The report, whose first copy dates back to the year 2007, has already been published in ten editions. This insight into more than a decade of joint work by the SEGIB and the Ibero-American countries has, on the one hand, enabled the region to showcase and highlight the work done and, on the other, to reflect on the importance of this collaborative systematisation exercise and the achievements it has brought about. Thus, the report's value lies not only in its ability to annually systematise over 1,000 SSC projects and actions in the region, turning it into a benchmark, but also in the way the working dynamics have developed among the different stakeholders participating in their production.

Many challenges and difficulties have to be faced when it comes to systematising the SSC of a developing region. After more than a decade's work across Ibero-America, many lessons have been learnt and many solutions have been found; hence, much of this groundwork will undoubtedly be of strategic use for other regional experiences or for any eventual intergovernmental process leading to the drafting of a global SSC report.

In this respect, preparing the report becomes an exercise in SSC in itself, where countries in the region work, collaborate and agree on the methodologies and concepts of South-South and Triangular Cooperation. One of the main challenges that had to be faced and which, to a large extent, still persists, is that of reaching the political and technical agreements needed to define the concepts and methodologies under which SSC is recorded. In this way, the countries, driven by their political will to progress in the matter, have focused on working on the areas of mutual understanding and on the quest for common denominators, overcoming differences and national peculiarities in their way of conceiving and developing their SSC. Over the years, this recognition of shared areas laid the groundwork for building a common framework for systematising SSC in the report. Building this framework has, moreover, been aided and articulated through gradual, coordinated work at two levels – the technical and the political.

The political level is represented through the member countries' national, high-level, international cooperation authorities, guaranteeing, in this way, representation of all the countries and incorporating their different perspectives under this common framework. Given the relative shortage of international spaces for discussing SSC effectively, the framework generated by the annual report preparation process in the SEGIB's political action arena has resulted in the building of an exceptional area for deliberating concepts and articulating shared positions of a periodic, enduring nature. Furthermore, the technical level is represented by these cooperation management institutions' civil servants, who work daily on executing and systematising the SSC carried out by their countries, enabling the conceived political framework to be adapted to what is really feasible in accordance with the countries' capabilities.

It is extremely important to point out that, as methodological advances lead to an improvement in recording systems,

this is a process that results in better information quality. Indeed, in many cases, it was the very effort of collecting the information every year that gradually drove the countries to develop and progress in building their own SSC recording systems, adapting them not only to the information needs of the report, but also to their own national information and management requirements. Without a shadow of a doubt, this improves the aggregate results of the SSC report and, more importantly, substantially enhances the quality of input for informed, evidence-based decision-making in the respective national SSC policies. This is especially important given the intrinsic nature of SSC as a powerful, dynamic instrument for adaptation to the countries' development challenges.

One of the milestones resulting from the above, the fruit of everyone's work and the culmination of this process, has undoubtedly been the design, creation, implementation and start-up of the only online data platform for South-South and Triangular Cooperation in place for a developing region. The Ibero-American Integrated South-South Cooperation Data System (SIDICSS) meets the specifications proper to any information system insofar as it enables the data it contains to be recorded, stored and used. Its uniqueness, nevertheless, lies in three key aspects:

- Its conceptual and methodological link with the SSC report
- The shared use made of it by two different stakeholders (the Ibero-American countries and the SEGIB)
- The incorporation of mechanisms that allow the countries to cross-reference information and validate it, in an exercise that affords outstanding technical soundness and political legitimacy to the aggregate data contained in the integrated database.

A document of these characteristics is important because it serves as a work and a visibility tool, both for the governments as well as for the SEGIB itself. Through this systematisation and analysis of their SSC, the countries can position themselves both at the domestic political and at the regional and international levels, endorsed by data collected by all the countries in the region. Especially after a decade's collection, the contents of the report serve to illustrate SSC trends and performance and to highlight the capabilities and challenges faced by countries in development issues and which can be addressed through the strengthening of competencies, the interchange of experiences and the transfer of technology.

Moreover, this in-depth analysis of knowledge of SSC offers empirical evidence for breaking down some of the myths that have been built around it, such as the idea that the countries of the Global South are divided into providers and recipients, demonstrating that even countries that are

The contribution of Ibero-American South-South Cooperation to the Sustainable Development Goals (SDGs)

Three important conclusions were drawn from this exercise:

- All the projects recorded were contributing, to a greater or lesser degree, to one of the 17 goals
- All the goals were addressed by South-South Cooperation (SSC)
- At least 60 per cent of the projects were also contributing to a second sustainable development goal, if not more.

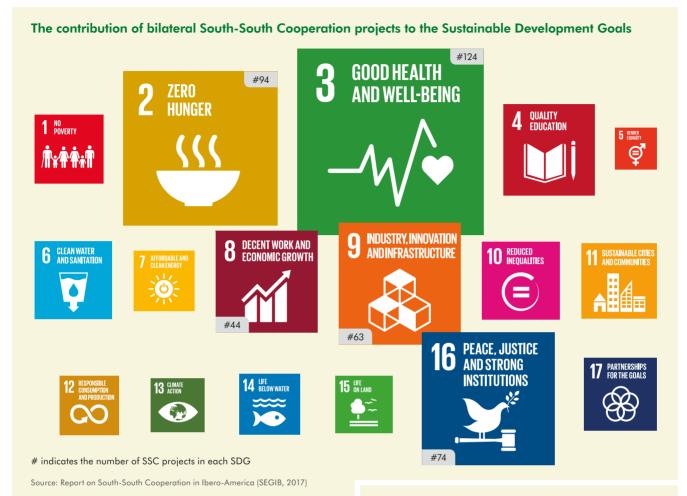
The main SDGs that were addressed through SSC in the region, according to the data of the latest report, are SDGs 2 and 3, relating to Food Security and Healthcare, respectively. In the case of Healthcare, 124 projects were recorded that were directly related to this goal and closely linked to strengthening health services and to researching the treatment and prevention of non-communicable diseases. As for the Food Security area, a large portion of the 94 projects pinpointed were framed within the agricultural industry and were especially geared towards improving productivity through technological development or increasing food production sustainability.

The third SDG that records most projects is Goal 16, relating to Peace, Justice and Strong Institutions, which was directly promoted through 74 projects that mainly sought to improve the efficiency and effectiveness of public institutions, as well as to enhance elements of transparency and strengthening of the judicial systems.

As for SDG 9, the third most important, concerning Industry, Innovation and Infrastructure, it was especially linked to the aspects of sustainability, increasing industry's contribution to GDP and upgrading the technological capability of the industrial sectors.

Finally, the fourth SDG in importance, Goal 8, was not only indirectly promoted by work in the agricultural and industrial sectors, but also by those that sought to increase employment levels and guarantee workers' rights.

mainly recipients of SSC can also play a role as providers and vice versa, that the large countries of the Global South, which are regarded as providers, receive, in turn, technical assistance from other countries in a mutual interchange



that characterises this technical cooperation. Likewise, this evidence leads to a reflection on the effective enforcement of the principles that the countries themselves ascribed in the Buenos Aires Plan of Action (BAPA), such as responsibility being mutual, respect for sovereignty and horizontal alignment, among others.

Last but not least, South-South and Triangular Cooperation, whose history is nothing new, has already been recognised as a means of implementing the Agenda 2030 in the fulfilment of the Sustainable Development Goals. Having more and better information on the activities that the countries of the Global South are already implementing serves to showcase successful experiences and national capabilities, which may be adapted and replicated in other countries through SSC mechanisms.

Projecting and becoming more familiar with SSC also contributes to positioning this cooperation modality in the international cooperation system as an indispensable tool, feeding, in turn, international debate spaces and their decision-making with information. From our Ibero-American

SDG	# of Projects	SDG # of Projec
SDG 3	124	SDG 1723
SDG 2	94	SDG 121
SDG 16	74	SDG 7 17
SDG 9	63	SDG 1217
SDG 8	44	SDG 1416
SDG 4	34	SDG 1314
SDG 10)27	SDG 1514
SDG 6	26	SDG 58
SDG 11	24	Total640

experience, we firmly believe that it is extremely important, in the specific context of the PABA+40 Conference to be held in the year 2019, to continue working, not only at the regional but also at the global levels, on furthering knowledge on the reality of South-South Cooperation.

Notes and References

Pages 2 to 14

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Triangular Cooperation – characteristics, realities and opportunities

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