United Nations
Framework Convention on
Climate Change

TEC Brief #9

Technology Executive Committee

South–South cooperation and triangular cooperation on technologies for adaptation in the water and agriculture sectors

Why this TEC Brief?

Water and agriculture are essential for poverty reduction, sustainable development and human well-being. Agriculture accounts for 70 per cent of total global freshwater withdrawals, making it the largest user of water along the entire agrifood supply chain.[1] The links between water and agriculture will be exacerbated in the near future under the pressure of population growth and climate change**.** Estimates indicate that 60 per cent more food will need to be produced to feed the world's population by 2050 and total global water withdrawals for irrigation are projected to increase by 10 per cent in the same period.[2] Further the outcomes of the 2013 third synthesis report on the technology needs assessments of Parties not included in Annex I to the Convention: For adaptation, the most commonly prioritized sectors were agriculture (84 per cent of the Parties) and water resources (77 per cent). [3]

Adapting water management and agricultural practices to climate variability requires integrated responses that address the complex and interrelated nature of global resource systems. These integrated responses can be fostered through the exchange of technologies that countries accumulate in their own development processes and which tend to be more accessible, adaptable and affordable than those from developed countries.[4] An essential alternative for developing countries in responding to the growing pressure of climate change on resource systems is therefore to step up cooperation for the exchange of more cost-effective technologies for adaptation, including in the context for implementating their national adaptation plans (NAPs), nationally determined contributions (NDCs) and the Sustainable Development Goals (SDGs).[5]

Yet, the potential for South–South cooperation and triangular cooperation (SSC/TrC) on technologies for adaptation in the water and agriculture sectors remains largely untapped.[6] Based on a mapping of SSC/TrC initiatives, an e-survey of national designated entities (NDEs)[7] and consortium partners and members of the Climate Technology Centre and Network (CTCN),[8] and recommendations of the Technology Executive Committee (TEC),[9] this TEC Brief outlines the challenges for SSC/TrC on technologies for adaptation, reviews best practices and lessons learned, and highlights the roles of different stakeholders in the successful replication and transfer of technologies for adaptation in the context of SSC/TrC.

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Highlights

- The adoption of the 2030 Agenda for Sustainable Development and the entry into force of the Paris Agreement may bring opportunities for countries to increase SSC/TrC for enhancing the transfer and deployment of adaptation technologies.
- SSC/TrC can further assist countries in implementing their priority adaptation actions as articulated in their NDCs, NAPs and other national and subnational adaptation planning efforts.
- Countries may count on the efforts taken by governments, research institutes and global institutions and mechanisms like the TEC and the CTCN to catalyse SSC/TrC on technologies for adaptation.
- Local stakeholders should also be involved and empowered to enable the replication and improvement of local solutions and thus promote the sustainable application of technologies for adaptation.
- The integration of hardware, software and orgware is also necessary and should be supported by flexible programmes and partnerships.
- Effective coordination and integration of technologies for adaptation in cross-sectoral planning and policy formulation by local and national governments should be pursued to ensure the implementation of appropriate adaptation actions.
- Similarly, institutional support to SSC/TrC for knowledge management and information-sharing and linkages between climate change and other development areas should be explored and properly reflected in adaptation action within NAPs and NDCs.
- Other global mechanisms, international networks and organizations such as the United Nations Office for South–South Cooperation (UNOSSC) can further support and promote SSC/TrC on technologies for adaptation and strengthen links with the SDGs.

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The potential of South–South and triangular cooperation on technologies for adaptation

Adaptation experience is accumulating across regions in the public and private sectors and within communities. Governments at various levels are starting to develop adaptation plans and policies to integrate climate change considerations into broader development plans.[10] SSC/TrC can help increase the adaptive capacity of countries by transferring knowledge and technology that tend to be attuned to local geoclimatic conditions, scaled down to levels appropriate to the size of local markets, and adaptable to the reality of low-income consumers. This knowledge and technology can further build local capacity and enhance countries' ability to adapt to climate change.

Yet, the potential of SSC/TrC on technologies for adaptation remains largely untapped. An e-survey conducted on 138 NDEs to the CTCN, 14 CTCN consortium partner representatives and 102 CTCN members revealed that nearly 50 per cent of the organizations had never engaged in SSC on technologies for adaptation in the agriculture and water sectors. The relatively few existing SSC/TrC initiatives on technologies for adaptation in the agriculture and water sectors tend to be concentrated in a small number of countries (see figure 1).[11] There are also few SSC initiatives that focus on the intersection between water, agriculture and climate change (see figure 1).[12] The SSC/TrC technologies for adaptation in the agriculture and water sectors in the largest potential demand by developing countries are illustrated in figures 2 and 3.[3]

Two main factors seem to contribute to these phenomena. First, the lack of a universally accepted definition of SSC/TrC poses questions on whether SSC/TrC encompasses people-to-people in addition to government-to-government cooperation. Second, the financial crisis that has affected northern countries and its impact on traditional aid, combined with the emergence of Brazil, Russian Federation, India, China and South Africa, has contributed to confining SSC/TrC to an instrument of foreign policy of 'emerging powers', when in fact it includes a much wider array of narratives, actors and modalities. Adding to this is the fact that South–South partners do not report to the Organisation for Economic Co-operation and Development Development Assistance Committee and that data and information on SSC/TrC remain limited. As such, many SSC/TrC initiatives fall off the radar and opportunities for SSC/TrC are missed. This is particularly true for Eastern Europe and the Arab States, which have been the first to adapt agriculture and water systems to climate change and have become a 'laboratory' for new technologies for adaptation.

Figure 1: Mapping of South–South cooperation on technologies for adaptation in the water and agriculture sectors

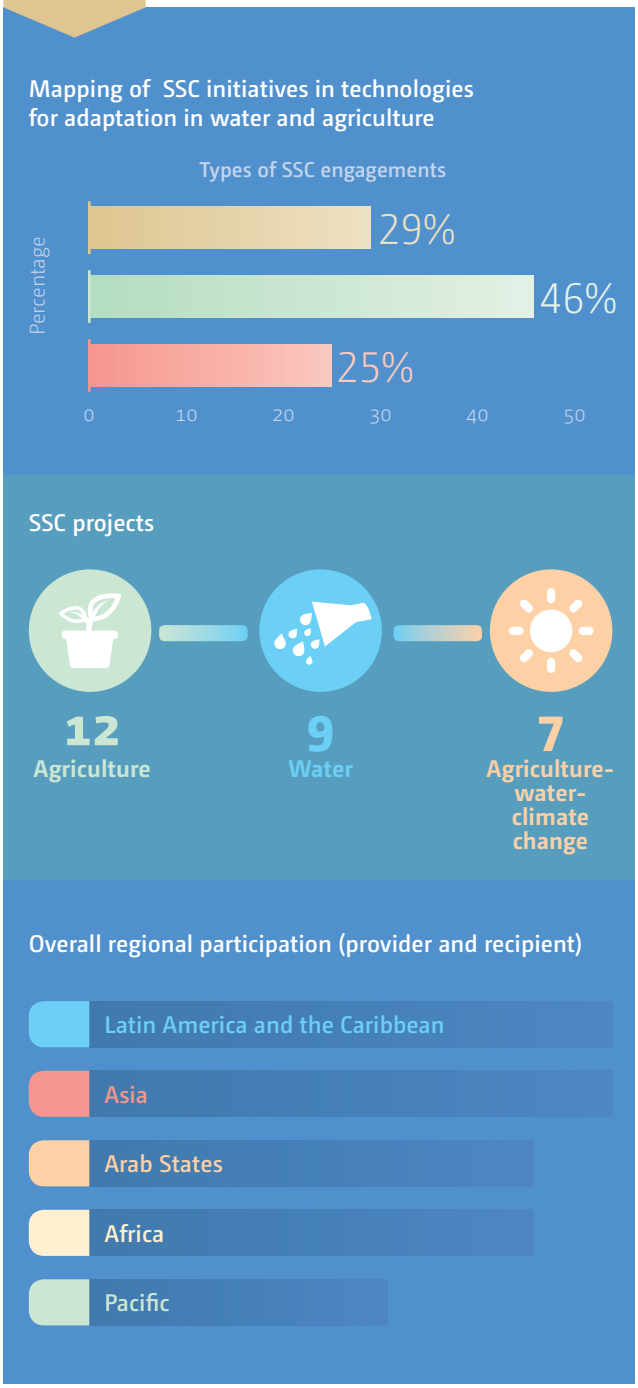


Figure 2: Largest potential demand for South–South and triangular cooperation on adaptation technologies in the agriculture sector

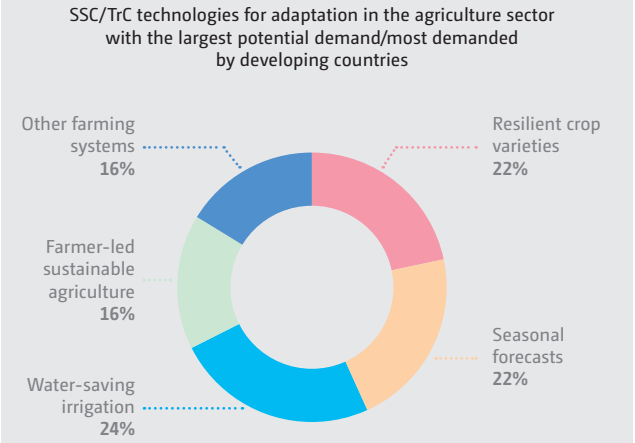
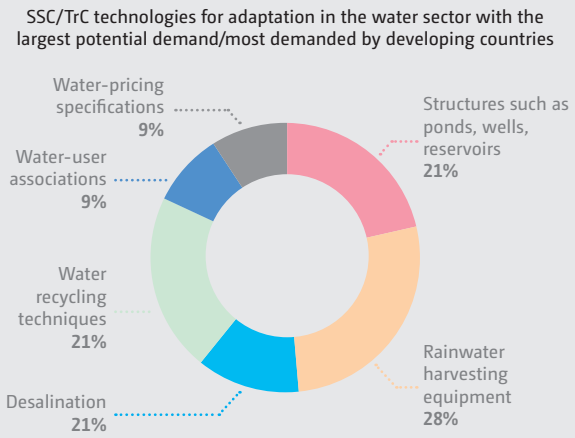


Figure 3: Largest potential demand for South–South and triangular cooperation on adaptation technologies in the water sector



Main challenges to South–South and triangular cooperation on technologies for adaptation in the agriculture and water sectors

In order to meet the potential demand for technologies for adaptation and to enhance support for SSC/TrC initiatives, SSC/TrC partners must address challenges such as: limited knowledge of southern adaptation technologies and initiatives; lack of or inadequate access to financial resources; inadequate legal and regulatory frameworks; and insufficient organizational and technical capacity, all limiting the transfer of technologies for adaptation among developing countries.[14]

At the institutional level, lack of funding and dedicated human resources were identified as some of the main factors that hinder organizations' engagement in SSC/TrC on technologies for adaptation. Measures to increase funding for SSC/TrC have included the introduction of specific allocations for technology research and development activities in the national budget or identifying and creating financial schemes and funds for technology transfer (see boxes 1 and 2). Other enablers include setting up coordination and communication channels for information exchange between partners.

The lack of regulatory frameworks for technology transfer and handling intellectual property also provides negative incentives for organizations that are considering investing in SSC/TrC. The measures put forward to overcome this challenge were quite diverse and include: establishing quality control systems and agricultural crediting and certification systems; formulating detailed regulations and standards for prioritized technology; creating policies to enforce land utilization and avoid conflicts between farmers; and reviewing the current regulatory framework to include an agricultural extension service (educating farmers to apply related scientific research to agricultural practices).

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Lessons learned

SSC/TrC has developed mechanisms for replicating and transferring technologies for adaptation in the water and agriculture sectors[15] and offers important lessons for countries should they choose to implement their NAPs and NDCs through SSC/TrC.[16]

Learning and sharing experience through personal interactions, such as exchange programmes, has proven to be an effective tool that can help to accelerate knowledge dissemination

SSC/TrC on technologies for adaptation is mainly delivered through capacity-building initiatives like training and study tours. While these exchanges continue to take place on an ad hoc basis, there has been growing support for more long-term capacity-building initiatives for a better appropriation of technologies. Therefore, delivery modalities and instruments that build relationships and capacity beyond the project lifespan (e.g. train the trainer programmes, joint research activities, and knowledge and technology networks and platforms) are gaining traction and being combined with one another, depending on the context, in more structured SSC/TrC interventions.

Capacity-building strategies should be designed to enable countries to devise solutions for their self-development. Hence, they should combine technical-practical training, supervised practices, evaluation of learning and other complementary initiatives. The strategies should further consider processes like technology inventories and observatories that can strengthen local participation, identification of policy priorities and actions, and mutual accountability. They should also include the creation of permanent systems like online platforms and networks to provide appropriate, cost-effective mechanisms for continuous collaboration and exchange of information.

Local stakeholders should be involved and empowered to enable the replication and improvement of local solutions and thus promote the sustainable application of technologies for adaptation

Indigenous knowledge and technology can be made more accessible, adaptable and affordable to developing countries. Mechanisms to identify, use and develop such knowledge and technology in the context of SSC/TrC include bottom-up, participatory approaches like community consultations and peer-to-peer learning. Such approaches help transfer new information to farmers and extend ready-to-use technologies that help vulnerable rural communities to adapt to climate variability. They are also important to empower local communities to contribute to action-oriented plans that prioritize adaptation strategies and to cope with the negative effects of climate change.

Box 1. Barley-livestock systems for better climate change resilience in Jordan and Iraq

Barley-based livestock production systems sustain some of the poorest segments of the rural population in North Africa and West Asia. In Iraq and Jordan, barley-livestock production systems rarely provide a dependable means of food supply and income for farmers. Limited access to inputs, fragmented extension and research programmes, and unsustainable farming practices are aggravated by climate variability and the increased incidence of drought. Iraqi and Jordanian barley farmers experience significant losses during prolonged dry spells. In 2008, barley-harvested areas decreased by 50 per cent in Jordan and declined from 750,000 ha to only 25,000–75,000 ha in northern Iraq.

A project funded by the International Fund for Agricultural Development builds on previous research of the International Center for Agricultural Research in the Dry Areas to improve awareness of climate change at the policy and community levels, deliver technologies to resource-poor communities and encourage farmers to adopt sustainable agricultural practices. The project aims to increase the productivity of barley-livestock agricultural systems in Iraq and Jordan while strengthening climate change resilience among targeted rural communities through national and community-level awareness-raising and ready-to-use technologies.

Recognition and management of indigenous knowledge and technology on water and agriculture

Community consultations on the variability of local weather patterns, climate change and threats to local livelihoods were an important part of the project. They helped frame local climate change plans that prioritize adaptation strategies. They also helped communities to cope with the negative effects of climate change, including through the identification of suitable technologies and management practices from other developing countries.

Knowledge management and capacity-building systems and strategies

Ensuring that new transformative technologies and management practices were placed directly in the hands of farmers was one of the main priorities of the project. To achieve this goal, an evaluation and climate change proofing of appropriate technologies was conducted according to criteria like sustainability, resilience to climate change, and measurable improvements in rural livelihoods. The evaluation was followed by the identification of opportunities and potential for the generation of new technologies capable of strengthening farmers' resilience. New technologies and information were provided via peer-to-peer learning, illustrating the transformative potential to farmers.

The integration of hardware, software and orgware is necessary and should be supported by flexible programmes and partnerships

Adaptive programmes and multidimensional partnerships contribute to the implementation of more contextually relevant, sustainable hardware technologies (e.g. new irrigation systems and drought-resistant seeds), but also software (e.g. insurance schemes and crop rotation patterns) and orgware technologies like early warning systems that combine hard measuring devices with soft knowledge and skills that can raise awareness and stimulate appropriate action. For this reason, the adoption of mechanisms for developing countries to present their needs and identify suitable solutions is extremely important for SSC/TrC on technologies for adaptation. These mechanisms include, for instance, criteria and indicators for selecting hot spots linked to scenario development, vulnerability assessment reports, and frameworks to improve regional knowledge and information-sharing.

Programmes and partnerships must be flexibly formed and different technologies carefully combined in order to be relevant and cost-efficient. There is also a need to extend the knowledge and information base to aid critical policy interventions that complement and strengthen existing adaptation efforts.

Effective coordination and integration of technologies for adaptation in cross-sectoral planning and policy formulation by local and national governments is essential to ensure the implementation of appropriate adaptation actions

A systematic approach is needed to take the cooperation to scale and fully leverage the diverse cooperation modalities within the SSC/TrC framework. South–South partners are therefore encouraged to form SSC/TrC strategies and embed them into national development planning. Additional efforts are needed to ensure that project findings and results feed into policy processes and to help devise policies to reduce barriers to technological application. This can be done throughout the project lifespan, for instance through meetings with relevant community members, extension officers, researchers and policymakers to discuss, validate and disseminate results as well as to formulate recommendations for helping local communities to cope with the impacts of climate change. Action plans based on these policy recommendations can further enable communities to bring climate change into sharper focus and implement adaptation activities.

Box 2. Adaptation to climate change induced stress in the Nile Basin

The Nile Basin is one of Africa's most important ecosystems, hosting 40 per cent of Africa's population. Although climate change plays a fundamental role in water management in the Nile Basin, reforms in the water sector often have very weak links to climate. Countries lack a comprehensive water policy, institutional capacity and adequate climate variability monitoring and response mechanisms.

A project, which is a partnership between United Nations Environment and the Nile Basin Initiative, sponsored by the Swedish International Development Cooperation Agency, has the overall goal to build the adaptive capacity of the Nile Basin countries that are most vulnerable to climate change. Results and information emanating from the project are expected to support decision makers in the Nile Basin in building resilient ecosystems and economies and in improving cooperative management of water resources.

Recognition and management of indigenous knowledge and technology on water and agriculture

An assessment methodology including themes, tools, criteria and indicators for selecting hot spots linked to scenario development was developed. The methodology sought to improve regional knowledge on adaptation strategies and transformative policies for cooperative management of water resources. A vulnerability assessment report based on the methodology identified adaptation actions for building the resilience of vulnerable sectors and ecosystems in the region. The report would also support critical policy interventions that complement ongoing efforts for cooperative management of water resources.

Knowledge management and capacity-building systems and strategies

The project helped strengthen the capacities of government agencies, research institutes, non-governmental organizations and other social actors that can facilitate climate resilience at the local and national levels. Project partners facilitated political and technical processes and provided climate information, training, and information management and dissemination through climate change adaptation portals and awareness materials. Several policy areas and recommendations for policy actions were identified as a result.

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Promoting and scaling up South–South and triangular cooperation to assist countries in implementing their adaptation actions

The adoption of the 2030 Agenda for Sustainable Development and the SDGs in 2015 and the entry into force of the Paris Agreement in 2016 may bring opportunities for countries to increase the use of SSC/TrC for enhancing the transfer and deployment of adaptation technologies. Increased use of SSC/TrC could further assist them in implementing their priority adaptation actions as articulated in their NDCs, NAPs, technology needs assessments and other national and subnational adaptation planning efforts. These countries can benefit from the concerted efforts of governments, research institutes, specialized United Nations agencies, programmes, funds and other global institutions and mechanisms (see figure 4).[17] It is important to note that for any SSC/TrC or any other technical cooperation modality to be effective, it must be focused on (a) specific challenge(s) or barrier(s) to identifying, prioritizing, piloting, deploying or scaling up adaptation technology.

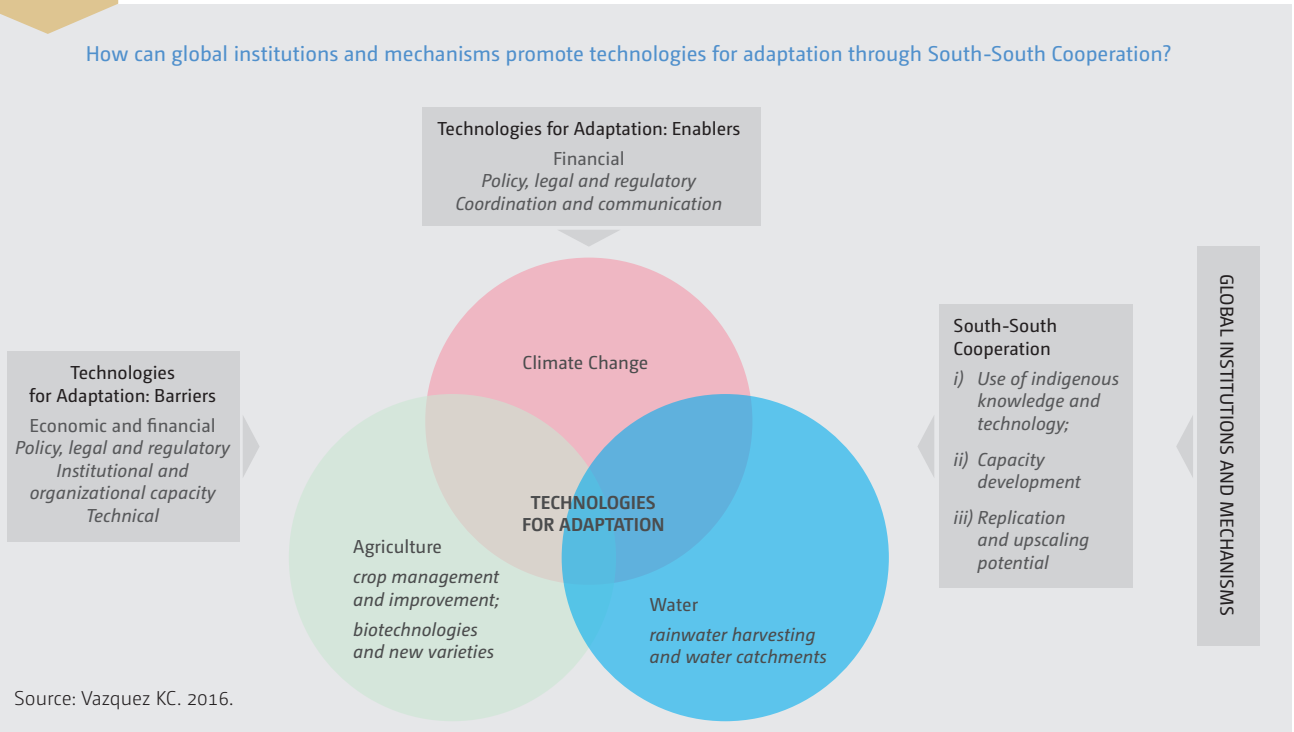
Ways to promote and scale up SSC/TrC to assist countries in implementing their adaptation actions include:

A. Bringing multiple stakeholders to work together in different capacities like policy design, knowledge management and exchange, and project implementation

There remains a lack of understanding of the concept of SSC/TrC and no systematic or widely available information on the trends and patterns of SSC/TrC. Further, there appear to be insufficient monitoring and evaluation frameworks and lack of an adequate environment for southern experts to share information. Countries also have different abilities to manage and participate in SSC/TrC, often resulting in differing approaches to SSC/TrC partnerships and unrealized potential.

It is important to understand needs by region. Information on common needs and priorities for regions with similar challenges should be identified in a coordinated fashion. In other words, it is important not only to know about the technology innovations that are being developed in southern regions, but also to find out what needs exist that are not being met.

Figure 4: Global institutions in the implementation of technologies for adaptation via South–South and triangular cooperation



Source: Vazquez KC. 2016.

SSC/TrC may be considered as a topic for discussion at the annual meetings, thematic dialogues and other regular events of the TEC, the CTCN and the Adaptation Committee. This would be an opportunity to regularly assess the state of SSC/TrC on technologies for adaptation, review progress, identify areas for enhanced support and propose recommendations. In addition, an online community of practice under the technology information clearing house TT:CLEAR and UNFCCC events can be useful avenues for interaction among international experts, policymakers, specific services of bodies under the Convention (including the TEC and the CTCN), and other relevant stakeholders and mechanisms.

B. Providing institutional support for SSC/TrC in order to enable effective knowledge management and information-sharing on adaptation technologies

There is growing need to mainstream SSC/TrC on technologies for adaptation into programmes and to secure regular funding to enable this. Organizations engaging in SSC/TrC may embed specific allocations for technology research and development in organizational planning and budgeting processes to secure regular funding for SSC/TrC initiatives. They may also map countries' commitments, the mechanisms through which funding for implementing these commitments is disbursed, how these mechanisms are accessed, and the barriers to accessing, disbursing and executing this funding.

There is also a need to create an 'SSC/TrC marker' to identify SSC/TrC projects and activities supporting technologies for adaptation as well as when a technology from another developing country has been used or is being developed. This may be done by the TEC and the CTCN in collaboration with UNOSSC and research institutions. The CTCN may develop a registry of all relevant information on SSC/TrC on technologies for adaptation and information on Parties' technologies for adaptation in the water and agriculture sectors that could be matched with countries' demands.

The emergence of specific funding mechanisms such as the New Development Bank and the Asian Infrastructure Investment Bank and their roles in promoting/upscaling SSC adaptation technologies should be further explored, since the approach offered by these new mechanisms may have innovated current approaches to SSC/TrC.

C. Exploring the linkages between climate change and other development areas (e.g. agriculture-water-climate nexus) and reflecting them in the adaptation action in NAPs and NDCs

Water, agriculture and climate change are inseparable. Yet, there seem to be few examples of SSC/TrC on technologies for adaptation that adopt integrated approaches to the water-food-climate nexus.[18] There is limited awareness of what hard, soft and orgware technologies for adaptation from the South there are and where they are located.

Actions may include: expanding ongoing efforts to develop a broadly accepted definition of adaptation technologies; mapping of technologies unique to use in the Global South; systematization of exchanges among developing countries, including the approaches taken, the modalities used and the strategies for sharing indigenous technology; and scaling up SSC/TrC. These efforts should build on and integrate with pre-existing initiatives and support the implementation of adaptation action in countries' NAPs and NDCs.

D. Using global mechanisms, international networks and organizations such as UNOSSC to support and promote SSC/TrC on technologies for adaptation and strengthen links with the SDGs

There is potential for complementarity and cooperation among the UNFCCC Technology Mechanism (comprising the TEC as a policy discussion body and the CTCN as the operative body) and the Technology Facilitation Mechanism (TFM) with regard to the implementation of SSC/TrC on technologies for adaptation. Other global initiatives like the TFM[19] can potentially help advance SSC/TrC on technologies for adaptation that integrate water, food and climate. As a gateway to information on existing science, technology and innovation initiatives, mechanisms and programmes within the United Nations across the 17 SDGs, the TFM can help address complex development challenges like the water-food-climate nexus through multidimensional initiatives.

As an intergovernmental body, the focus of the TFM on initiatives, mechanisms and programmes may potentially create limitations in terms of support for private innovation and small businesses. These could be addressed by the CTCN through its technical assistance, networking and knowledge management services. Complementarity might also be explored with the TEC, through joint policy spaces and networks to promote SSC/TrC on technologies for adaptation. Coordination of the initiatives for SSC/TrC on technologies for adaptation taken by the TFM, the TEC and the CTCN should be further discussed as the TFM evolves, taking into consideration the review of adaptation activities under the Convention scheduled for 2017 as well as the implementation of the 2030 Agenda for Sustainable Development. Further links between adaptation technologies and the 2030 Agenda for Sustainable Development should allow the TEC and the CTCN to expand their engagement.

Recommendations for promoting and upscaling South–South cooperation to assist countries in implementing their adaptation action

Issues	Actors	Recommendations	Actions
Limited understanding of the SSC/TrC concept applied in the context of adaptation technologies Low visibility of SSC/TrC initiatives in the context of technologies for adaptation Insufficient monitoring and evaluation frameworks as well as information on the trends in SSC/TrC	Governments, research institutes, specialized United Nations agencies, programmes and funds, and other national and international organizations TEC/CTCN and Adaptation Committee	A. Expand ongoing efforts to develop a broader understanding of SSC/TrC in adaptation B. Develop a knowledge base of integrated technologies for climate change adaptation from the South C. Create a policy space and network to promote SSC on technologies for adaptation D. Increase visibility of existing technologies and networks from the South E. Feed project findings and results into policy processes and devise policies to reduce barriers to technological application	1. TEC: Include SSC/TrC as a topic for discussion at annual meetings, thematic dialogues and other regular events for raising awareness and interaction 2. TEC: Recommend the creation of an 'SSC/TrC' marker for identifying SSC/TrC projects and activities 3. CTCN: Create an online community of practice on TT:CLEAR 4. Develop action plans based on policy recommendations that can further enable communities to bring climate change into sharper focus and implement adaptation activities
Lack of an enabling environment for institutions and experts from the South to effectively share information and knowledge and scale up South–South exchange efforts	Governments, research institutes, specialized United Nations agencies, programmes and funds, and other national and international organizations TEC/CTCN and Financial Mechanism	F. Mainstream SSC/TrC on technologies for adaptation into programmes and secure regular funding G. Map existing and new funding mechanisms to secure regular funding for SSC/TrC initiatives and assist countries to access them H. Develop an online knowledge repository and exchange platform to identify and match demand with supply of SSC/TrC on technologies for adaptation	5. Embed specific allocations for technology research and development in organizational planning and budgeting processes to secure regular funding for SSC/TrC initiatives 6. Set up coordination and communication channels for information exchange between partners, and matchmake demand-supply, adaptive programmes and multidimensional partnerships 7. Map existing commitments of countries, the mechanisms through which funding will be disbursed, how organizations can access these mechanisms, and potential barriers to access, disbursement and execution 8. CTCN: Develop a registry of all relevant information on SSC/TrC on technologies for adaptation, to be hosted on the CTCN website 9. Explore the potential of the New Development Bank and the Asian Infrastructure Investment Bank to promote/upscale SSC adaptation technologies
Few integrated approaches to the water-food-climate nexus and links to other development areas Limited awareness of what hard, soft and orgware technologies for adaptation from the South there are and where they are located	Government, research institutes, specialized United Nations agencies, programmes and funds, and other national and international organizations TEC/CTCN and Adaptation Committee	I. Create a policy space to promote an integrated approach to SSC and link to the SDGs J. Develop a broadly accepted definition of adaptation technologies and a mapping of technologies unique to use in the Global South K. Systematize exchanges among developing countries, building on and integrating with pre-existing initiatives, and support the implementation of adaptation action in countries' NAPs and NDCs	10. Map technologies and systematize exchanges among developing countries, including approaches taken, strategies for capacity-building, management of indigeneous technology, and scaling up potential 11. TEC: Promote an integrated approach to SSC on adaptation technologies, to support the implementation of the adaptation action in countries' NAPs and NDCs
Tapping the potential contributions of other global mechanisms and institutions	Government, research institutes, specialized United Nations agencies, programmes and funds, and other national and international organizations TEC/CTCN and TFM	L. Explore complementarity and foster cooperation among the TFM, the TEC and the CTCN	12. Establish joint policy spaces and networks to promote SSC/TrC on technologies for adaptation 13. CTCN: Coordinate SSC/TrC on technologies for adaptation initiatives by the TFM and the CTCN. This should be pursued as the TFM evolves

Source: Adapted from Vazquez KC. 2016.

Acknowledgements

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4 Vazquez KC and Lucey A. 2016. Advancing South–South cooperation in education and skills development: lessons from the field. United Nations Development Programme.
5 Aggarwal A. 2011. South–South cooperation in technology transfer and the clean development mechanism: Some explorations.
6 In 2014, official development assistance (ODA) provided by member countries of the Organisation for Economic Co-operation and Development Development Assistance Committee (OECD-DAC) totalled USD 135.2 billion, while SSC in the Global South was estimated to be worth USD 20 billion (United Nations General Assembly document A/70/311). Comparisons between ODA and SSC must be done with caution. Knowledge and technology exchange is at the heart of SSC and may be underestimated if measured by OECD-DAC frameworks. Global estimates of SSC may also differ from the data reported by South–South partners at the national level as there is not yet an agreed international framework for assessing and monitoring SSC
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8 Vazquez KC. 2016.
9 See the key messages and recommendations of the TEC to the Conference of the Parties at its twenty-second session, available at http://unfccc.int/ttclear/policies.
10 Intergovernmental Panel on Climate Change. 2014
11 Results of a mapping of ongoing and completed projects between 2010 and 2015 in which transfer of technologies for adaptation in the agriculture and water sectors has originated in developing countries, and of an e-survey conducted on 138 NDEs to the CTCN, 14 CTCN consortium partner representatives and 102 CTCN member representatives. The mapping and the e-survey provided a relatively small subset for generalization of trends across regions and countries.
12 Results of mapping as in xi
13 Results of mapping as in xi
14 Vazquez KC. 2016.
15 Vazquez KC. 2016.
16 See the key messages and recommendations of the TEC to the Conference of the Parties at its twenty-second session, available at http://unfccc.int/ttclear/policies.
17 Vazquez KC. 2016.
18 Vazquez KC. 2016.
19 Launched in September 2015, the TFM aims at increasing the creation and use of innovative technologies that will help achieve the 2030 Agenda on Sustainable Development. More information is available at https://sustainabledevelopment.un.org/TFM

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About the Technology Executive Committee

The Technology Executive Committee (TEC) is the policy component of the Technology Mechanism, which was established by the Conference of the Parties in 2010 to facilitate the implementation of enhanced action on climate technology development and transfer. Along with the other component of the Technology Mechanism, the Climate Technology Centre and Network, the TEC is mandated to facilitate the effective implementation of the Technology Mechanism.