Alternate Paradigms: India's Role in Triangular Climate Cooperation

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Abstract

Changing global economic landscapes and power structures have led to India augmenting its climate persona and engaging with other countries through various platforms to accelerate decarbonisation. Yet, despite global power shifts, international finance and technology transfer continue to revolve around Global North-South channels. Differing social, cultural, and institutional landscapes between the North and South as well as impasses within traditional donor-recipient hierarchies have caused bottlenecks to accelerated climate action.

This calls for alternative modes of cooperation between countries that share similarities in climate vulnerabilities, market mechanisms, physical infrastructure, and institutional capabilities. One such cooperative model, which remains understudied within the context of increased climate action, is triangular cooperation (TrC) wherein two or more developing countries implement projects with the support of a multilateral institution or a developed country. Under TrC, countries with similar developmental experiences can exchange and transfer the most effective strategies towards low-carbon transitions. TrC creates a platform that allows for shared learning within a horizontal mode of cooperation.

India has made significant strides in climate action through innovative local technological, policy, and financing options that are also well-suited for implementation in Africa, Asia, and the Indo-Pacific region through a TrC model. This policy brief highlights the agreements through which India currently promotes TrC and the challenges and opportunities within these engagements. Though India is actively engaged in TrC, projects tend to be fragmented and one-off, with little systemic evidence for scale-up. For India to be seen as an important partner, capable of providing solutions to tackle climate change, it needs to improve its institutional capacity for systematic, evidence-based technology and knowledge exchange. India can spearhead TrC by creating a knowledge hub where countries come together to understand and match technological needs and implementation mechanisms required to achieve their climate goals.

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India’s climate persona has undergone a significant evolution in response to changing global economic landscapes and power structures, allowing it to confidently and adeptly navigate the global arena more nimbly to drive decarbonisation (Nachiappan, 2023). Currently, India is part of various multilateral, minilateral, and bilateral agreements with countries such as the United States (US), France, the United Kingdom (UK), and Japan, where addressing climate change is often a top priority. At the same time, by leveraging domestic innovations and know-how, India increasingly provides policy, technology, and capacity-building assistance to countries in the Global South (Chaturvedi & Piefer-Söyler, 2021). Despite shifting power dynamics and emerging powers exerting themselves in the global order, international finance and technology-transfer mechanisms continue to revolve around North-South channels (Urban, 2018). Relying on North-South channels alone to facilitate climate action will probably not be sufficient for developing countries to meet their climate goals.

Emerging economies might face similar climate vulnerabilities as their Southern counterparts, which could make their technology more effective in similar socio-economic contexts. An example is the transfer of sustainable agricultural technology from India to Kenya, highlighting the potential for successful technology exchange and adaptation in these regions (Hosono, 2013; United States Agency for International Development [USAID], n.d.). Additionally, technologies tend to function within a specific social and cultural context, with market mechanisms, physical infrastructure, and local technical capabilities having to complement climate solutions (De Coninck & Bhasin, 2015) for successful implementation. For instance, individualistic cultures prefer formal contracts, while those in developing countries prefer solutions that rely more on arrangements arising from trusted community members and social networks (Intergovernmental Panel on Climate Change, 2014). Countries also tend to have different institutional capacities to absorb technology, and, hence, most transfers go to middle-income countries rather than the poorest countries as they are ill-equipped to deal with the vulnerabilities of climate adaptation (Kirschherr & Urban, 2018).

Triangular cooperation (TrC) is a form of cooperation for increased climate action that is relatively understudied. The United Nations (UN) defines TrC as “Southern-driven partnerships between two or more developing countries, supported by a developed global country(ies) or multilateral organization(s), to implement development cooperation programmes and projects” (United Nations Development Programme, n.d.). TrC for climate action came into global focus during the Buenos Aires Plan of Action for Promoting and Implementing Technical Cooperation among Developing Countries (BAPA) in 1978. However, subsequent negotiations continued to focus primarily on channels between historic emitters and emerging economies. More recently, with power shifts in the global economic order, the United Nations Office of South-South Cooperation (UNOSSC) has revived the importance of TrC, arguing that it can close the technology gap by mobilising expertise, resources, and different stakeholders to achieve climate goals (UNOSSC, 2023). This arrangement does not delink the responsibility of developed countries to help developing countries but rather allows cooperation to happen horizontally, with a greater emphasis on the needs of the recipient countries.

India’s experience with climate and energy innovations makes it a pivotal partner, particularly for countries in Asia, the Indo-Pacific, and Africa, where Indian technologies can be adapted locally (Mittal, 2020). Further, India can also benefit from TrC arrangements by engaging in multi-directional exchanges that are beneficial to all partner countries (Haug, Cheng, & Waisbich, 2023). TrC can play a critical role in allowing India and countries in the developing world to accelerate their climate transitions by easing bottlenecks in technology and knowledge transfer for
appropriate and cost-effective solutions. TrC melds two different but complementary forms of cooperation—North-South and South-South—and tries to harmonise different actors to reach one common goal (Farias, 2015). It is not possible to achieve TrC goals with only South-South or North-South cooperation. This is because Southern countries often lack the financial and institutional capacity to scale up their assistance efforts, which makes it difficult for them to match their technical expertise with countries that have similar needs (Hosono, 2013).

Essentially, cheaper and more suited technology gets transferred between developing countries using well-established administrative, institutional, monitoring, and financial capabilities of the developed world. TrC brings a horizontal mode of cooperation by adding a third actor who changes the dynamics to one of reciprocity and provides an improved possibility for actors to pursue strategies that form better alliances and generate competition and mediation (Abdenur, 2007). This arrangement allows partners to utilise localised knowledge and sources of innovation that are often overlooked in traditional technical assistance. It also allows countries who have had similar development experiences to pass their knowledge to countries making the same low-carbon transition without resource and financial constraints. Further, such cooperation allows the creation of long-term institutional capacity, knowledge networks, and innovation hubs within the recipient countries. TrC generally offers greater flexibility for recipient countries to set the agenda for technical assistance, as they have Southern partners. Therefore, expanding climate cooperation beyond North-South channels to increase TrC could be the key to improved and accelerated climate mitigation and adaptation.

In this context, this brief explores the role that India can play in facilitating TrC for climate action. The first section reviews the status of ongoing TrC arrangements in India, identifying the varying success of different agreements and provides an in-depth analysis of two case studies. The second section offers future policy options for India to be more proactive in TrC arrangements to emerge as a leader in global climate cooperation.

2. India and Triangular Cooperation for Climate Change

Traditionally, India has been reticent to partake in TrC because it felt that its principles of developmental aid were different from those of Western donors. India’s assistance philosophy has been in line with Southern solidarity; it aims to provide demand-driven, non-conditioned, non-colonial support for countries in the Global South. However, as it has begun to grow from an aid recipient to a donor, its political ambitions have changed. A desire for international recognition as a growing climate leader—combined with motivations to emerge as an alternative to the growing power of China’s influence in the developing world, particularly with the Belt and Road Initiative (BRI)—has prompted India and its industrialised partners to actively participate in TrC arrangements (Paulo, 2021).

India has been engaged with a number of countries, such as Switzerland, Norway, and Canada, over one-off triangular projects. Over the years, India has signed more long-term formalised triangular arrangements, which often include a climate and energy focus, with donor countries and multilateral organisations. However, these partnerships have not been equally successful (Mittal, 2020; Taniguchi, 2020; Wagner, Lemke, & Scholz, 2022). Table 1 lists a few crucial long-term agreements that were announced and the climate and energy projects that were developed under them. In the next section, two cases have been discussed when India’s TrC on climate and energy technologies has been successful.
Table 1: Triangular Agreements with India and Partner Countries and Organisations

<table>
<thead>
<tr>
<th>Partner</th>
<th>Partnership</th>
<th>Projects carried out</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>Triangular Development Partnership (TriDeP)</td>
<td>Climate-smart agriculture, disaster risk management, renewable energy, and grid integration in Africa and Asia</td>
<td>The first amendment was signed in 2014; the second amendment was signed in 2021 and extended up to 2026</td>
</tr>
<tr>
<td>UK</td>
<td>Statement of intent on partnership for cooperation in third countries</td>
<td>Clean energy and modern energy access in Africa</td>
<td>Signed in 2015, valid up to 2020; subsumed under India-UK Global Innovation Partnership 2022–2036</td>
</tr>
<tr>
<td>Japan</td>
<td>Asia–Africa Growth Corridor (AAGC)</td>
<td>None so far</td>
<td>Initiated in 2010; AAGC declaration in 2016</td>
</tr>
<tr>
<td>Germany</td>
<td>Joint declaration of intent on partnership for triangular cooperation</td>
<td>None so far</td>
<td>Signed in 2022; valid up to 2025</td>
</tr>
<tr>
<td>France</td>
<td>Indo–Pacific Triangular Cooperation Fund</td>
<td>None so far</td>
<td>Announced in 2023</td>
</tr>
<tr>
<td>UN</td>
<td>India–UN Development Partnership Fund</td>
<td>Renewable energy and agriculture</td>
<td>Established in 2017</td>
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Source: Author’s compilation based on various sources.

Besides specific long-term triangular agreements, India has also initiated the creation of triangular platforms such as the International Solar Alliance (ISA) and the Coalition for Disaster Resilient Infrastructure (CDRI). These initiatives have moved beyond North-South cooperation, allowing for diverse actors from developed and developing countries to engage outside the usual bilateral and multilateral channels. These large global initiatives create institutional frameworks within which the possibility of triangular cooperation projects and paradigms can be explored (Paulo, 2021; Chaturvedi & Piefer-Söyler, 2021).

2.1 Case 1: India–US

In recent years, India’s relationship with the US has evolved from that of donor–recipient to the US seeing India as a strategic partner whose expertise and indigenous technologies can be used to address development challenges (Chaturvedi & Piefer-Söyler, 2021). The US recognises that India has policy expertise and technical knowledge that are suitable for other countries, particularly in renewable energy and climate-smart agriculture. This led to the Triangular Development Partnership (TriDeP), which was signed by the two countries in 2014. Ever since the agreement, the countries have carried out a slew of successful projects in vulnerable countries in Asia and Africa. One of the agreement’s key policies was to choose up to 30 innovations from India and try their effectiveness in a third country. Further, the partners signed a second amendment in 2021, extending the TriDeP between the US and India up to 2026 (AIR News, 2021). Amongst other sectors, clean energy and climate-smart agriculture have been at the forefront. Other areas include drip irrigation systems, integrated pest management, seed dribblers, food processors, and weather-resistant hybrid seeds in Kenya. The South Asia Regional Initiative for Energy Integration is yet another measure designed by USAID to promote cross-border electricity trade between Bangladesh, Nepal, and India by facilitating transmission lines between the countries (USAID, n.d.).
The ambitions of the US–India partnership continue to grow. Two recently published reports advocate expanding the presence of India and the US in the Indo-Pacific region and Southeast Asia (The Energy Research Institute, 2022). However, several projects and the objectives of the India–US agreements are incomprehensive and limited in scale and diversity (The Asia Foundation, 2022). While there are a few success stories, TrC is not widespread, with projects being niche, lacking large-scale or long-lasting impacts, and having limited funding. Further, the vision document is extremely ambitious compared to the actual level of implementation of the projects (Mittal, 2020).

2.2 Case 2: India–UN

India has taken a leadership role in UN projects, choosing to actively participate in various TrC arrangements. This is because TrC arrangements do not follow the typical North-South donor-recipient relationship, and the UN is seen as a neutral organisation (Paulo, 2021). This partnership resulted in the creation of the India–UN Development Partnership Fund in 2017, where India donated USD 150 million to help other developing countries achieve their development goals (UNOSSC, n.d.). The projects support Southern-led and demand-driven projects that help countries achieve global sustainable development goals (SDGs). These projects are spread across Africa (23%), Asia and the Pacific (32%), and Latin America and the Caribbean (42%) (UNOSSC, n.d.).

The arrangements tend to focus on small island and least-developed nations. Many of the projects target SDG 7 (affordable and clean energy) and SDG 13 (climate mitigation and adaptation). India has leveraged its experience with renewable energies and installed a 1.22 MW solar power plant in rural areas of Tuvalu, providing electricity to 20% of the population. It has also given USD 1.1 million to Kiribati for solar lighting and provided Haiti with solar pumps for agriculture (Sebastian, 2023). In Cameroon, India undertook projects to improve rural housing energy and promote energy efficiency, while in Dominica, it promoted sustainable agriculture and eco-tourism. India has expertise in handling extreme weather events as seen from its cyclone-resistant building, early warning systems, and evacuation protocols in Odisha. It used these experiences to install early warning systems in seven Pacific countries, design post-flood management using technology in Gambia, and help Gabon with its climate adaptation and resilience policy. In all these projects, India’s role has gone beyond being a facilitator, as it was deeply engaged in conceptualising appropriate fund structures and approaches and sharing feasible financial models (Paulo, 2021). These arrangements will help India have long-lasting and impactful engagement with the Global South.

3. Challenges and the Way Forward

3.1 Need for Standardisation of Technological and Financial Models

Quantifying India’s engagement in TrC is difficult, as India does not specifically report projects under this label (Paulo, 2021). Climate and energy projects that India has undertaken remain small scale and fragmented and occur on a case-by-case basis among countries that already have a history of collaboration with India. For effective scale-up of TrC projects, there needs to be technical matching of demand for development solutions and supply for practical experiences as well as matching for financial services and models, which would be effective in country-specific contexts (Rhee, 2011).

The report of a recent roundtable meeting between Indian and German officials, aimed at promoting triangular projects for sustainability, revealed that participants shared many examples of successful triangular projects (GIZ, 2022). Chaturvedi and Piefer-Söyler (2021) documented key triangular projects that have been carried out by India and its partners. However, learnings and takeaways from projects that allow standardisation and scaling-up remain scarce. Without institutional mechanisms to standardise implementation,
projects have high transaction costs, as stakeholders must understand each other’s needs, settle on formal mechanisms for the arrangement, and align their agendas. Other countries involved in triangular arrangements should also assess specific requirements regarding mitigation, adaptation, and loss and damage in the recipient country. There needs to be better monitoring and evaluation of implemented projects to understand which models have worked or failed, the reasons for the project trajectories, and the potential to replicate these projects in different contexts. Standardised mechanisms ensure that donor countries are more assured that their financing will be used credibly. India should have an inventory of successful projects and learnings that can be easily adopted in countries which need those technologies. Such initiatives can be spearheaded by the Ministry of External Affairs in collaboration with think tanks and civil society organisations that can provide the required research support.

3.2 Creation of a Knowledge Hub Among the Global South

The Asia Foundation report on triangular development (2022) highlights that the identification of an effective collaborator in host and pivotal countries is key for the effective implementation of a project. While being facilitated by state actors, anchoring the projects in local organisations can be essential for mobilising resources and accelerating the rate of technology transfer. Further, the identification of multi-stakeholder engagement allows better exchange of ideas and innovation. Anchoring the project within a local organisation also promotes the project to have more local ownership. Indian civil society is vibrant, dynamic, and responsible for many grassroots innovations for climate and energy solutions, particularly in rural areas. However, the focus of civil society has primarily been domestic rather than focusing on solutions for countries outside of India. Yet, civil society organisations have played a crucial role in enabling the execution of TrC projects. Successful examples include the setting up of solar villages and training of villagers in many African and South Asian countries by the Barefoot College in Rajasthan and SELCO Enterprises (Chaturvedi & Piefer-Söyler, 2021). These organisations do not merely seek to replicate the successful models from India in the recipient country but build regional centres to understand what models will work given the regional context.

At the 2023 Voice of the Global South summit, the prime minister announced the intention to build a Global South Centre of Excellence. This centre is intended to bring together the best practices and solutions from all countries in the Global South so that they can exchange, collaborate, and learn from each other to promote developmental solutions (Roy, 2023). Such knowledge hubs will be imperative to promote better TrC, as the recipient and pivotal countries will need to identify organisations that can house and implement the projects. These centres should include private, public, and civil society organisations. Establishing such forums, which allow a transnational exchange of ideas, innovations, and practices, will also make it easy to facilitate partnerships between civil society across countries. These established relationships will guarantee the success of such projects.

3.3 Creation of Centres of Excellence

Once sector-specific expertise has been identified, pivotal countries must learn how to innovate their local knowledge and transfer it to recipient countries. Instead of India undertaking one-off projects in other countries, donor countries should foster long-term partnerships with recipient countries where they already have ongoing engagements in Africa, Southeast Asia, and the Pacific Islands. Hosono (2013) argues that an effective way to foster TrC is for donors to help pivotal countries build centres of excellence. For instance, Japan assisted Brazil’s agricultural institute in developing a new strain of soya beans that could be grown in the tropical savanna regions of the country. This project was considered a great success, and Brazil’s agricultural institute, in turn, began to help other countries, such as Mozambique, in
developing similar crops for their climates. Similarly, Japan helped Chile develop premier domestic aquaculture institutes, after which Chile went on to assist other Latin American countries, including Peru, Ecuador, Brazil, Colombia, Venezuela, and El Salvador, in developing their aquaculture projects.

These centres of excellence can become institutions that offer a deep understanding of the challenges of partner countries and establish a strong network between India and recipient countries that can lead to long-term collaborations. These centres can be designed based on existing expert institutions in India, such as the Centre for Excellence in Climate Change at the Department of Science and Technology, Indian Institute of Technology, Madras, which focuses on effective ways to address coastal adaptation and resilience (Press Information Bureau, 2021). This centre is part of a multi-country research initiative between Germany, Thailand, and India, specifically looking at how climate adaptation tools and technology can be scaled up and transferred across regions.

3.4 Leverage Existing Frameworks to Narrow Down on Climate Focus

Agreements such as the Asia–Africa Growth Corridor (AAGC) with Japan and the TrC Framework with Germany attract global attention and signal to the world the existing cooperation between India’s engagement with its allies. However, projects envisaged within these frameworks have not taken off and largely remain unused. If such plans fail to produce tangible results, it will reflect poorly on India’s institutional capacity and could adversely affect its diplomatic relations with other countries. Taniguchi (2020) argues that the reason such frameworks fail to materialise into actionable projects is that the pivotal and donor countries have shared goals, values, and geopolitical interests but no concrete plans of action. These agreements tend to be broad, covering a range of sectors from healthcare, education, infrastructure, agriculture and so on. Private players and non-state actors are reluctant to invest in these schemes, as they do not see a clear method of investment nor have access to local organisations within the donor countries.

This provides an excellent opportunity for India to assume global climate and sustainability leadership and prioritise increased climate development in the Global South within these agreements. India and the donor countries can focus on climate and energy policies within these frameworks, which are much needed in many parts of the developing world. They can establish networks that share information among the pivotal, donor, and recipient countries on how to participate in mutually beneficial engagements.

4. Conclusion

With the current shift in global power dynamics, it is possible to explore different modes of cooperation to enhance climate action. Triangular cooperation is a reasonable alternative cooperative model that facilitates the transfer of well-suited and inexpensive technology to developing countries while using established administrative, institutional, monitoring, and financial capabilities of developing countries. India has made significant strides in climate action, including technological, policy, and financing innovations, that are well-suited for implementation in other developing countries in Africa, Asia, and the Indo-Pacific region.

India has increasingly started signing triangular cooperation agreements; however, many of these agreements do not result in project implementation. Further, the projects that are carried out tend to be fragmented and one-off, with little documentation of success stories, standards of implementation, and learnings that can be replicated in other contexts.

For India to be acknowledged as a pivotal partner that offers innovative solutions to tackle the challenges of climate change, it needs to improve its institutional capacity for technology and knowledge transfer. There

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needs to be a more systematic monitoring and evaluation of projects and standardisation of documentation, technology, and financial models. India should aim to design long-standing developmental assistance projects by establishing centres of excellence with long-term technology assistance. Finally, to enable the best technology and knowledge matching, a knowledge hub is required where organisations from the recipient and pivotal countries come together to understand their requirements on climate action and the best way that India can help these countries achieve their climate goals.

India aspires to be the voice of the Global South and promote the bloc’s interests. Helping nations effectively tackle one of the world’s most pressing problems and demonstrating the effectiveness of alternate modes of cooperation, such as the triangular arrangements, can be a step towards India’s realising its ambitions.
References


