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Guest Column

From Rivals to Partners: How can China and India work together to achieve global climate goals?

By Meera Gopal

China and India represent a unique case within the Global South. Together, they are the largest emitters, contributing more than one-third of the total global carbon dioxide (CO2) emissions (China **contributes about 26 percent** and India about 7 percent, making them the world's largest and third-largest emitters, respectively). At the same time, both countries have

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The *China-India Brief* is a bi-monthly digest focusing on the relationship between Asia's two biggest powers. The Brief provides readers with a key summary of current news articles, reports, analyses, commentaries, and journal articles published in English on the China-India relationship. It features a Guest Column weighing in on key current issues in China-India relations.

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become increasingly vulnerable to adverse impacts of climate change with recurrent extreme weather events such as flash floods, heat waves, and coastal erosion.

Internationally, both nations have set climate targets, yet these goals lack the ambition to prevent the most severe consequences of climate change. India and China are among the wealthiest developing countries, with significant geopolitical influence over their peers. This positions them as contenders to lead the Global South not only in climate mitigation efforts but also resilience building and adaptation. Furthermore, both countries face growing expectations from the Global North as well as low-income countries, including the Least Developed Countries (LDC) and Small Island Developing States (SIDS), to take on more responsibility for climate action. They are also expected to differentiate themselves from the rest of the developing country bloc due to their ability to mobilise international finance (both public and private) and their comparatively higher capacity to implement climate solutions with fewer challenges than low-income countries.

In this context, while climate cooperation has historically remained limited due to geopolitical challenges, the recent warming in bilateral ties, with greater stability at the border, opens up new opportunities for these Asian giants to work together in advancing climate action as well as cementing their position as global leaders. This piece explores the challenges and opportunities for collaboration that could strengthen trust and bilateral relations in the long run.

Climate Cooperation, Geopolitical warming, and the Climate Imperative

Sino-Indian relations have been remained tensed due to territorial disputes along their shared border. The 2020 border standoff in Galwan Valley, **the worst since the 1962 war**, had significantly impacted any progress made in building bilateral ties over the years. Security concerns—both territorial and economic—have hindered meaningful cooperation.

Bilateral engagements on climate, though limited, date back to the 1990s. Major agreements on climate cooperation were reached between 2009 and 2010, with notable progress made in 2015 ahead of the Paris Agreement. In their 2015 **joint statement**, both countries emphasised that their partnership was "mutually beneficial," and pledged to enhance dialogue on domestic climate policies as well as multilateral negotiations. They had also committed to collaborate on practical cooperation in areas such as clean energy technologies, energy efficiency, low-carbon urbanisation, and climate adaptation. However, post-Paris, engagement on climate cooperation waned following the Doklam standoff in 2017 and the continued political and boundary issues.

Interestingly, there has been some consistency and continuity on the multilateral front. Both countries have engaged within the United Nations

Framework Convention on Climate Change (UNFCCC) by coordinating through the BASIC countries group (Brazil, South Africa, India, and China) as well as more recent Global South-oriented platforms such as BRICS (Brazil, Russia, India, China, and South Africa) and the Shanghai Cooperation Organization (SCO). As recently as 2024, through the BASIC group, they had jointly called for "**unilateral trade-restrictive measures**" in the COP29 agenda, reflecting a shared stance on addressing climate-related trade imbalances. Last year, through **the BRICS platform**, China supported India's bid to host COP33 in 2028. More notably, during COP26 in Glasgow in 2021, India and China effectively coordinated to ensure that the final decision text avoided binding commitments to a **coal phaseout**, instead adopting much weaker language on coal phasedown.

Nevertheless, **recent developments** on total disengagement at the border have created space for greater dialogue between the two countries. At the BRICS Summit in Kazan, Russia, last year, Indian Prime Minister Narendra Modi and Chinese President Xi Jinping met for the first time after five years—a strategic step towards realigning their bilateral ties. In a **post on X**, Modi stated that India-China relations were "important for the people of our countries and for regional and global peace and stability." While most of the positive spillovers are expected in the commercial space, there is also a renewed opportunity for both countries to pursue efforts towards mutual beneficially cooperation in the climate domain. The urgency of climate action and shared vulnerabilities provide strong incentives for such collaboration. **Hansen and Kaack** have also highlighted that "cooperation or non-cooperation between the two countries on climate would have significant repercussions for the global community.

Low Hanging Fruit: Climate Cooperation can strengthen bilateral ties

While the de-escalation of border tensions is an important step forward, it should also not be understood as a **complete reset of ties** and a restoration of trust between the two countries. However, it is important to utilise this momentum and seize the opportunity to work towards the greater good of the global community.

Given this renewed opportunity, both countries should leverage climate cooperation to achieve a dual purpose: supporting each other in fulfilling their climate ambitions—including energy transition and adaptation efforts – while also strengthening their bilateral ties. Revisiting the 2015 Joint Statement offers a valuable starting point, focusing on areas such as clean energy technologies, energy conservation, energy efficiency, and sustainable transportation, including electric vehicles. This cooperation could also further expand in emerging areas such as green hydrogen development and greening the logistics industry. Addressing air pollution is another critical area where India can learn

and benefit from China's experience. The policies implemented in Beijing to curb air pollution **could serve as a guide** for India to address similar challenges in its major cities such as Delhi and Mumbai.

Another promising area for cooperation is the protection of the Himalayan region, which is experiencing adverse climate change impacts in the form of receding glaciers, desertification, and glacial lack outburst floods (GLOF). However, this is easier said and done, as it raises significant security concerns related to both territorial and water disputes. For instance, India has **expressed concern** following China's recent approval of a mega dam (touted to be the world's largest dam) on the Tibetan Plateau's Yarlung Zangbo which takes the name Brahmaputra as it enters India. While China has insisted that the dam will not negatively impact downstream riparians (India and Bangladesh), it might do more to alleviate concerns for the two downstream countries by working together using data and research from neutral, independent bodies such as the International Centre for Integrated Mountain Development (ICIMOD).

There is also potential for climate issues to be incorporated into high-level diplomatic engagements. For instance, the issue of transboundary rivers and the **sharing hydrological information** was discussed during the recent meeting of Special Representatives of India and China, NSA Ajit Doval and Foreign Minister Wang Yi, in December 2024. A promising starting point for cooperation would be to strengthen existing channels such as the **Expert Level Mechanism** (ELM) to facilitate the exchange of hydrological data—which will facilitate responses to climate related adverse events.

China's economic might bring significant climate financing to the table, while India's strength lies in its capacity for low-cost and innovative climate solutions. Collaboration in these areas could lay the foundation for exploring triangular cooperation models to support other global south countries in their energy transition efforts. So far, both countries have had different approaches to South-South cooperation. While China has engaged on a bilateral front with other developing countries through financing critical large-scale infrastructure and development projects, India has focused on cooperation through capacity building and supporting small-scale resilience projects. This includes initiatives such as the **UN Fund** and other minilateral alliances such as the International Solar Alliance (ISA) and the **Coalition for Disaster Resilient Infrastructure** (CDRI). By bringing their respective strengths to the table, both countries could not only yield mutual benefits but also foster positive outcomes for the entire Global South community.

Way Forward

With around a third of the global population, India and China have a vested interest in protecting their citizens from the varying impacts of climate change, while also aiding other developing countries build a shared future. Joining forces on climate efforts—domestically and internationally—

could be a mutually beneficial pathway that would also help their developing country allies. This could be achieved by collaborating on existing platforms such as China's Global Development Initiative, and India's ISA and CDRI.

It is clear that both India and China stand to benefit by becoming partners rather than rivals in their pursuit of leadership in the Global South. In the short term, the return of a Trump administration in the United States could provide another window for the two countries to strengthen their development partnership and pursue shared interests. Despite the Indian government's **efforts to reduce dependence** on Chinese-made solar equipment, China remains India's largest trading partner. The Economic Survey of India has also highlighted last year that India could benefit from **integrating into Chinese supply chain**, especially in clean energy and sustainable transportation sectors.

In the long term, the two countries can utilise existing multilateral platforms including BRICS and G20 to address pressing issues facing the Global South including food and water security, climate finance for energy transition, adaptation, and resilience building.

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Guest Column

Sino-Indian Relations in Light of Green Energy Transition

By Liuyang He, Maitreyee Mukherjee

Image Credit: Wikimedia Commons/ Nikki Ritcher Photography

As Asia races toward a greener future, China and India emerge as pivotal players, balancing increasingly fierce competition with potential collaboration in shaping the region's energy transition. Their dynamic interplay holds the key to global low-carbon transformation.

The risks posed by climate change are becoming increasingly urgent, demanding global action on an unprecedented scale. China and India, as two of the world's most populous nations and largest economies, are pivotal in addressing this looming crisis. Together, these two giants—ranked **first and third** among global greenhouse gas emitters—accounted for approximately 40 percent of global carbon emissions in 2023.

Amid these stark statistics lies a glimmer of hope. Both nations have made international commitments to curb their emissions. China has **pledged** to reach peak carbon emissions by 2030 and achieve carbon neutrality by 2060. India, while operating on a longer timeline, has **committed** to net zero emissions by 2070 and aims for a 45 percent reduction in carbon intensity as an intermediate target.

In pursuing these pledges, China and India—wo of the **largest** coal producers and consumers—have embraced the transition to **clean energy**, aligning their climate goals with domestic policy priorities such as energy security and industrial modernisation. In the lead-up to COP26 in 2021, China released a pivotal **Working Plan** detailing its renewable energy (RE) **targets**: achieving a 25 percent share of non-fossil fuel energy consumption and over 1200 GW of installed wind and solar capacity by 2030, and surpassing 80 percent of non-fossil fuel energy consumption by 2060. Notably, China exceeded its 1200 GW target six years **ahead of schedule** in 2024 and is projected to contribute nearly 60 percent of the global RE capacity by **2030**.

India, with its vast renewable energy potential and urgent need to meet the energy demands of its growing population, is also pursuing an aggressive green energy strategy. At **COP26**, India committed to increasing its non-fossil fuel electricity generation capacity to 500 GW and

fulfilling over half of its energy demand through renewables by 2030.

By 2023, the country had already achieved a significant milestone, with 40 percent of its electricity production capacity coming from renewable sources. These efforts to expand RE capacity have been touted as one of the most **ambitious** clean energy programs in the world.

The rapid advances in green energy by these two powerhouses have profound implications—not only for their bilateral relations but also for the global fight against climate change.

China: Taking Lead in Global Energy Transition

Over the past two decades, China has made remarkable strides in its green energy transition, progressing from domestic adoption and strong government support to establishing itself as a global leader in investments and **manufacturing**. Since 2013, China has accounted for **over 40 percent** of the world's annual RE capacity additions, and by 2023, it contributed to more than half of the newly installed capacity globally. It is also the world's largest investor in the energy transition, with investments reaching $676 billion in 2023, driven in large part by the **Belt and Road Initiative**.

Central to China's leadership is its dominance in the global green technology supply chain. The country **leads** in the mining, refining, and manufacturing of transition-critical materials that are indispensable for RE technologies, particularly cobalt, copper, and nickel.

In **2022**, China alone hosted 80 percent of the global installed manufacturing capacity for solar modules, far surpassing Vietnam (5 percent) and India (3 percent). Furthermore, it has remained the single largest producer at every stage of the global solar supply chain—from polysilicon to wafers and cells. Moreover, China also accounted for over 60 percent of global manufacturing capacity for onshore wind turbine nacelles.

China's dominant position in the global supply chain stems from the significant cost advantages enjoyed by Chinese companies, **driven** by strong market demand from developed countries, decades of strategic policies from both central and local governments, and a relatively low-cost domestic labour force. These factors, in turn, have led to a reduction in the global cost of RE technologies.

Competition Intensifies as India Catches Up

While the declining costs of clean technologies have benefited global consumers and support climate goals, they have also fuelled tensions when intersecting with geopolitics and emerging conflicts of interest.

Back in the early 2010s, India emerged as one of the **beneficiaries** of falling solar panel prices, driven largely by China's manufacturing overcapacity. As Chinese solar manufacturers sought to absorb their

domestic surplus in overseas markets, India became a key growth area. This dynamic had, at the time, fostered a symbiotic relationship: China found a ready market for its excess capacity, while India benefited from more affordable solar photovoltaic technology, easing its domestic energy security concerns and accelerating progress toward its climate commitments.

However, this once cooperative relationship has become increasingly strained as India's domestic demand for renewable energy surges and concerns about overreliance on Chinese suppliers mount. To meet its target of 500 GW of renewable energy capacity by 2030, India must scale its capacity by approximately **2.5 times** in the next six years. According to the **Energy Research Institute**, India's electricity demand is projected to quadruple between 2020 and 2050, significantly increasing the share of renewables in the country's energy mix. Yet, the lack of a diversified domestic supply chain has emerged as a critical vulnerability, exposing India's energy security to considerable risks.

Geopolitical tensions and strategic **distrust** between India and China have further compounded these challenges. India increasingly views China's dominance in critical minerals and green technology supply chains as a strategic liability. In response, New Delhi has sought to bolster its domestic manufacturing capabilities and reduce dependence on Chinese imports. Since 2018, India has ramped up efforts to secure critical mineral assets abroad, including forging partnerships with Latin American countries to build a **strategic reserve**.

To incentivise domestic production, the Indian government **imposed** a 40 percent duty on solar modules and a 25 percent duty on solar cells in 2022, signalling a clear pivot toward self-reliance in green technology.

At the same time, India has actively sought to challenge China's dominance in clean energy on the global stage. Under its leadership, the **International Solar Alliance** (ISA) has recently initiated work on developing transnational solar grid, positioning India as a focal point in regional green energy deployment. Furthermore, since 2021, clean energy cooperation has been a central focus of **the Quadrilateral Security Dialogue**—which includes India, Japan, Australia, and the United States—a group that China has denounced as an "**Indo-Pacific NATO**." As India advances within the global green energy supply chain, competition with China has inevitably intensified, further eroding the alignment of mutual interests between the two countries.

Space for Cooperation Remains, but Trust and Communication Are Key

While Sino-Indian relations are often characterised by great power rivalry and competition, there remains potential for **cooperation** in the energy sector, provided mutual trust is enhanced through improved communication and coordination. One promising avenue for **collaboration** lies in the exchange of technology and market access, particularly through expanded joint

ventures in solar panel manufacturing, wind turbine production, and energy storage solutions. Such collaboration could generate economies of scale, thereby driving down costs for both countries. In the medium term, India could leverage China's technological expertise to bolster its renewable energy infrastructure, while China would benefit from continued access to India's rapidly expanding renewable energy market.

Furthermore, India and China could explore advancing their cooperation within broader platforms such as BRICS, which offers opportunities for joint initiatives in regions where their rivalry is less pronounced. In markets like **Africa**, for instance, China's financial support and technical expertise could complement India's strengths in human resource development, fostering synergies that not only benefit both nations but also contribute to the sustainable development of emerging economies.

From the perspective of collective rationality, however, the competition between China and India may paradoxically serve the global good in the long term. India's growing role in the green energy value chain has the potential to further drive down the costs of clean technologies, enhance supply chain resilience, and, as a result, accelerate the global energy transition.

Conversely, instances of cooperation between the two nations that prioritise preserving fossil fuels in their energy mix—such as their joint stance at **COP26** advocating for a "phase-down" rather than a "phase-out" of coal—risk undermining global efforts to combat climate change.

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Bilateral relations

China urges India to prioritise border issue within bilateral relations

The New Indian Express, January 22

China has urged India to prioritise border issues, emphasising that both sides should work together to maintain peace and tranquillity in border areas.

China, India focusing on development, cooperation conducive to region and world, Chinese FM on Jaishankar's remarks on bilateral ties

Global Times, January 21

Chinese Foreign Ministry spokesperson Guo Jiakun emphasised that China and India should prioritise development and cooperation to ensure that the Global South grows stronger, fostering peace and prosperity both in the region and globally.

India Protests China's New "Counties", Parts Of Which Are In Ladakh

NDTV, January 3

The Indian government lodged a formal protest after the regional government in Northwest China announced plans to establish two new counties in territory that India claims as its own.

China and India in the Region

Sri Lankan President Dissanayake's first visit to China since taking office is of great importance to bilateral ties: FM

The Global Times, January 10

Weeks after his visit to India, Sri Lankan President Dissanayake will make his first visit to China, where he is set to meet President Xi Jinping and Premier Li Qiang.

Indonesia welcomes new BRICS membership as bloc expands

France24, January 7

Southeast Asia's largest and most populous country has become the most recent country to join BRICS, expanding cooperation within the Global South.

Why Trump's blow-hot, blow-cold on China worries India

Al Jazeera, January 6

Analysts believe that Trump's upcoming tenure will be a significant test for India-China relations, with many in India expressing concern over his toned-down rhetoric on China.

Trade and Economy

India's growing trade imbalance with China: Can Budget 2025 provide a solution?

The Economic Times, January 15

India's trade deficit with China increased to $85.1 billion in fiscal year 2024, as imports from China rose by 10 percent, while exports to China dropped by 10 percent.

Going big on 2025 GDP, major Chinese local-level economies unveil ambitious targets

South China Morning Post, January 14

Several key provinces and cities in China have set ambitious GDP targets for this year, indicating that Beijing's policymakers are committed to maintaining a national growth target of at least 5 percent, despite the renewed challenges posed by US President-elect Donald Trump.

China's Trade Surplus Reaches a Record of Nearly $1 Trillion

The New York Times, January 12

In 2024, China recorded a $990 billion dollar trade surplus, surpassing its previous record high of $838 billion in 2022, despite growing "criticism from an ever-lengthening list of China's trade partners."

Indian economy likely to be 'a little weaker' in 2025: IMF MD

The Hindu, January 11

At an annual media roundtable, IMF's Managing Director predicted that the Indian economy would be slightly weaker in 2025.

Energy and Environment

China, India seek new supplies as US sanctions tighten grip on Russian oil

Reuters, January 14

New aggressive US sanctions on Russian oil producers and tankers have led many Indian and Chinese buyers, who had previously navigated around sanctions and the G7 price cap, to shift away from Russian oil to alternative sources.

Renewable energy capacity addition in India increases by 113 pc in 2024: Centre

The Economic Times, January 13

India added close to 30 gigawatts of renewable energy capacity in 2024, more than doubling the amount from 2023, as the country progresses towards its renewable energy targets for 2030.

China to Keep Tapping Coal to Meet Its Energy Security Needs

Bloomberg, January 9

China's coal output is expected to rise for the ninth consecutive year in 2025, with high stockpiles maintaining low prices and securing the country's energy needs.

Analyses

What is in store for US-India ties as new US president takes office?

Global Times, January 18

By Liu Zongyi, Director of the Center for South Asia Studies at the Shanghai Institutes for International Studies

Despite New Delhi's public stance that it is not concerned about US-India relations under a Trump administration, Indian officials have valid reasons for concern, particularly with immigration issues and the potential de-prioritisation of the Indo-Pacific strategy, which could lead to tensions in the relationship.

The red flag as China's expansionist strategy rolls on

The Hindu, January 16

By Rahul M. Lad, Assistant Professor in the Geography Department at Sir Parshurambhau College in Pune, India

China's "unpredictable" and "aggressive" approach to the region, which threatens India's sovereignty, must be met with a collective regional response that India should play a key role in shaping.

What To Expect From China-India Relations in 2025

China Global South Project, January 14

By Daniel Balazs, a Research Fellow of the China Program at the S. Rajaratnam School of International Studies, Nanyang Technological University

2025 is anticipated to be a year of "cautious progress" for India-China relations, with overall improvements despite occasional setbacks. This will have significant implications for external actors, including the US and Russia.

As long as India and China keep dancing around border dispute, diplomatic stability can never be

Channel NewsAsia, January 6

By Gunjan Singh, Associate Professor at the Jindal Global Law School, OP Jindal Global University, in India

While both India and China may aim to de-emphasize their border disputes and focus on normalizing relations through other issues, history shows that an unresolved border dispute could resurface and undo any progress made.

Books and Journals

Game theoretical analysis of China-India interactions in the Brahmaputra River Basin

Journal of Hydrology, January 2025

By Anamika Barua, a professor at the Department of Humanities and Social Sciences, Indian Institute of Technology Guwahati India; Tanushree Baruah, an assistant professor at the Department of Economics, Cotton University Guwahati India; and Sumit Vij, an assistant professor at the Sociology of Development & Change group at Wageningen University in the Netherlands.

This paper employs a game model to explain the water politics between China and India in the Brahmaputra River Basin (BRB) for the past two decades. The study utilised two methods: (i) interviews with experts to analyse the strategic interactions and construct the payoffs and; (ii) a comprehensive literature review focusing on the geopolitical contexts of the BRB. Through the game model, it was found that there is an ebb and flow relationship between China and India; with periods of deterioration followed by attempts at improvement. Moreover, the post-2017 border clashes have worsened the trust deficit, between the riparians complicating future water negotiations. The paper conclude that evolving geopolitics in the subcontinent and emerging hydropolitics have led to a status quo. China and India continue to engage in competitive, unilateral water resource projects, escalating into a "race for dams."

Our team

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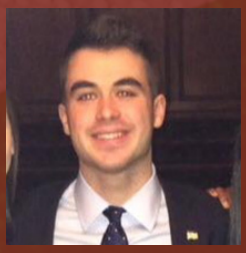

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OTHER CAG PUBLICATIONS

- *Partnership or Polarization? Southeast Asian Security between India and China* edited by Evan Laksmana and Byron Chong (Contemporary Southeast Asia, 2023)
- *Asian Conceptions of International Order: What Asia Wants* edited by Kanti Bajpai and Evan Laksmana (International Affairs, 2023)
- *How Realist Is India's National Security Policy?* edited by Kanti Bajpai (Routledge, 2023)
- *Deterring Conflict and Preserving Peace in Asia* edited by Drew Thompson and Byron Chong (Centre on Asia and Globalisation, 2022)
- *What Can the United States Learn from China about Infrastructure?* by Selina Ho in *The China Questions 2* (Harvard University Press, 2022)
- *India Versus China: Why they are Not Friends* by Kanti Bajpai (Juggernaut Books, 2021)
- *Winning the Fight Taiwan Cannot Afford to Lose* by Drew Thompson (Strategic Forum, 2021)
- *Routledge Handbook of China–India Relations* edited by Kanti Bajpai, Selina Ho and Manjari Chatterjee Miller (Routledge, 2020)

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