



Climate Diplomacy as Soft Power Strategy: India's Path through Finance and Innovation

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Abstract

This paper examines how India's climate diplomacy operates as a soft power strategy within contemporary international relations. Rather than treating soft power as an outcome or reputational attribute, the study analyses the mechanisms through which climate-related engagement may generate non-coercive influence. Focusing on climate finance, institutional initiatives such as the International Solar Alliance (ISA) and the Coalition for Disaster Resilient Infrastructure (CDRI), and emerging clean technology pathways including the National Green Hydrogen Mission. The paper explores how India seeks to enhance legitimacy, institutional presence, and normative standing within global climate governance. The analysis situates India's climate diplomacy within broader debates on equity, South–South cooperation, and development-sensitive sustainability, highlighting its dual positioning as both a developing country advocate and an increasingly active climate actor. By linking finance and innovation with diplomatic practice, the study contributes to understanding climate diplomacy as a constrained yet significant avenue through which states pursue soft power in a system shaped by voluntary cooperation and normative contestation.

Keywords: Climate Diplomacy, Soft Power, Climate Finance, Technology Transfer

Introduction

Climate change has evolved from an environmental concern into a distinct domain of global governance. It is characterized by long time horizons, scientific uncertainty, and limited binding enforcement mechanisms. Under these conditions, influence is exercised less through coercion or material pressure and more through persuasion, legitimacy, and the ability to shape shared understandings among states (Bernstein, 2001).

The concept of soft power, developed by Joseph Nye, provides an important theoretical lens for understanding influence in such settings. While early interpretations of soft power emphasized cultural appeal and national image, Nye's later work places greater emphasis on agenda-setting, institutional engagement, and the capacity to shape normative frameworks within international politics (Nye, 2008; Nye, 2011; Nye, 2017). This evolution is particularly relevant to climate diplomacy, where influence is embedded in rules, institutions, and collective expectations rather than enforced through formal authority.

India presents an analytically significant case for examining climate diplomacy as a potential instrument of soft power. It has consistently emphasized principles such as equity, climate justice, and common but differentiated responsibilities, while simultaneously expanding its engagement in climate finance, institutional initiatives, and technology cooperation (Kumar, 2023; Ratha & Barik, 2025). This positioning raises important questions about how a state without material dominance seeks to exercise influence within global climate governance, and under what conditions such engagement contributes to legitimacy and authority rather than strategic dependence.



This study examines India's climate diplomacy through an analytical application of Nye's soft power framework. Rather than treating soft power as a fixed outcome or reputational asset, the paper approaches it as a relational process operating through identifiable mechanisms, including legitimacy-building, institutional leadership, and normative framing (Nye, 2011). Climate diplomacy is thus examined as a potential soft power tool whose effectiveness depends on sustained policy alignment, institutional participation, and external perception. At the same time, the analysis remains attentive to constraints such as implementation challenges, perception mismatches, and structural inequalities within the international system, which condition the translation of climate engagement into influence (Acharya, 2014).

By focusing on climate finance, technology transfer, and institutional initiatives, this paper assesses how climate diplomacy functions as a form of non-coercive influence in contemporary international relations. The analysis does not assume automatic or uniform outcomes; instead, it examines the conditions under which climate-related engagement contributes to credibility, agenda-setting capacity, and normative influence. The following sections outline the research questions and methodology guiding this inquiry, before examining the empirical dimensions of India's climate diplomacy in detail.

Historical background Literature Review

While military strength has attracted attention of statesman and political scientists since the ages, contemporary analysis of geopolitical dynamics has attributed considerable attention to soft power. It is defined as power of attraction to deploy non coercive instruments to influence the behavior of other states (Nye,2004). Although disagreements exist over the potential of the soft power diplomacy it has been gaining prominence among scholars working on environment, diplomacy and international relations. Unlike traditional threats, climate change spans continents and thus requires collaborative efforts of the international community. Unlike hard power, analysis of a nation's soft power rests on examining the various parameters which contribute to increased familiarity, reputation and influence of the state. Hence investment in sustainable tech and efforts is a significant aspect of increasing India's soft power. One such tool which can be useful in boosting soft power is adherence to Sustainable development goals SDGs which can project a state as a responsible and credible actor among investors, stakeholders, states and among people (Kumar, 2023).

The developing world is more vulnerable for they lack both resources and finance worsening their economic and socio-political conditions. It has been noted that climate change can deplete India's GDP by 2.6% by 2100 by negatively impacting rainfall patterns, agriculture, livestock and the marginalized sections of society (Sharma, Singh and Kathuria, 2022). India has been engaged in global climate negotiations beginning from Rio summit. However, India's stance has evolved considerably from Rio to Copenhagen summits reflecting its growing economy, quest for soft power and global leadership. In their Review of Climate diplomacy of India from 2014-2024, Keshab Chandra Ratha and Arta Barik points to the India's twin strategy for balancing its global commitments without compromising its domestic requirements. The authors highlighted how India acts as a bridge between the developed and developing countries owing to its rapid development along with developing partnerships with Global south enabling sharing of green technology, training and capacity building initiatives and increased investment in climate resilient infrastructure in African and island states. This shift in India's image from being a "spoiler" to a "conciliator" or a "bridging" nation marks India's willingness to assume a greater role in global climate governance and becoming an influential player with global responsibilities (Jayaram, 2018). The major drivers of this change in India's climate position were India's aspirations of becoming a global player by investing more in renewable energy and green technology along with balancing



China's growing soft power and influence among the developing world. Hence one can see the relationship between greater climate financing, green technology and a country's soft power.

Kumar (2023) argues that India has taken long strides under SDG 13 i.e. combatting climate change and its impacts by achieving 20 percent of its emission reduction targets for 2030 in 2021 itself. By constantly taking efforts in improving its rank in Climate Performance Index, India is positioning itself as a responsible actor using narratives of resistance and institutional leadership.

Emerging nations like China and India are now not only advocating greater cooperation between the global north and south but also investing in green technology, tech transfers etc. This proactive role highlights the attempt of emerging nations like India to seek a greater role in Global climate regime and thus increasing their soft power. When compared to China, India's efforts appear to be less ambitious due to differences in the scale of investment done by Chinese authorities. The same is highlighted by Irem Askar Karikar in his article where he pointed that after 2009 Copenhagen Summit, both India and China's climate diplomacy has experienced a shift with greater emphasis on voluntary target. This increased engagement globally and domestic efforts with focus on adoption of greener technology and willingness to share it with world has had its positive impact on soft power of these two. Echoing similar concerns, Arindam Basu (2018) highlights that India's imports of green technology is three times higher than its exports thus marking the deficit in India's current technology exports. A major problem in the technology transfer between developed and developing world is the intellectual property rights and patents which are guided under the TRIPS Framework. Although article 10 of Paris Agreement entails tech transfer among states, the developed countries have been effectively guarding their industrial and market interests and the terms of tech transfer remains contentious. Under such restrictions, domestic investment and international funding is required for India to embark on its journey for cost effective green technology catering to its domestic as well as export ambitions. However, the article falls short to be descriptive overview lacking real world data corresponding to the nature and scale of technology that is to be transferred.

Rasmus and Adrian in Technology transfer? The rise of China and India in green technology points to the role of unconventional technology transfers in the case of India and China which played significant role in domestic innovation and investment in research and development both domestically and overseas. The article highlighted the broader vision of technology transfer arguing that transfer is not linear and incorporates transfer of not just hardware but knowledge and capabilities.

One of the key aspects of enhancing soft power is creating resilient and sustainable institutions which can secure cooperation from members. While India has always been active in shaping the global climate regime, it has nonetheless embarked on creating effective Institutions like International solar Alliance (ISA) in 2015 and Coalition for Disaster Resilient Infrastructure (CDRI) in 2019 to engage in securing global partnership and increasing soft power. These institutions serve as platforms to gather support and secure financing and engage in capacity and institutional building, cooperating on technology transfer and training. Examining the linkage of solar power and soft power narrative, Heather Bedi in his article India's Soft Solar Power highlights the efforts of the Indian government to project India as a legitimate actor to receive investment and finances from investors. The depiction of India's potential as a global leader in solar power by the Indian government helping India to validate its policies and signal its future plans. Prime Minister Narendra Modi has used various international summits from COP26 to India's G20 presidency to present India as a destination and source of low-cost solar equipment's, provider of technical expertise and to accumulate greater climate financing from the developed world.

Research Questions



1. How does India's Climate diplomacy serve as a mechanism of soft power in contemporary international relations?
2. Through which instruments- climate finance, institutional leadership and technology transfer- does India seek to translate climate action into international influence?
3. To what extent do these initiatives generate attraction and legitimacy among global south?

Research methodology

The study employs a qualitative and interpretivist methodology aligning with the nature of the research. The rationale for a qualitative methodology arises due to the nature of key concepts like soft power and legitimacy which cannot be quantified like other aspects of power like hard or military power. Theory of soft power, coined by Joseph Nye, serves as the primary theoretical backdrop of this study. While Nye deployed soft power to highlight the importance of norms, institutions and culture in order to map the non coercive influence of states, this paper seeks to operationalize the concept of soft power against climate diplomacy.

For source selection, certain themes were chosen to categorize different material according to their relevance for the research. These themes include soft power, institutional leadership, climate finance and technology transfer. The research focus is not limited to track the inauguration of initiatives but to analyze the narratives and the impact of these formal initiatives on the soft power of India. Academic sources were drawn from peer reviewed journals and established IR scholarship. This study also incorporates and engages with the works of alternative IR scholarship located in the Global south like India and China. The various secondary sources used in this study includes various governments reports and international institutions like world bank, UN and organizations like international solar alliance. Various indexes like Global Soft Power Index have been utilized to assess the ranking and parameters of measuring the soft power capabilities of states.

Soft Power, Climate Diplomacy, and Their Linkage

Climate change has become a defining issue in contemporary international relations, reshaping how influence operates within global governance. Unlike traditional security domains, climate politics is characterized by long time horizons, collective action problems, and the absence of binding enforcement mechanisms. Under these conditions, outcomes depend less on coercion and more on persuasion, legitimacy, and the ability to shape shared understandings among states. Climate diplomacy therefore provides a particularly suitable context for examining the operation of soft power.

Joseph Nye's concept of soft power offers the theoretical foundation for this analysis. Nye defines soft power as the ability to shape the preferences of others through attraction rather than coercion or material inducement (Nye, 1990; Nye, 2004). While early interpretations emphasized cultural appeal and national image, Nye's later work highlights agenda-setting, institutional influence, and the capacity to frame political choices within international systems (Nye, 2008; Nye, 2017). This shift is especially relevant to climate diplomacy, where influence is embedded in norms, institutions, and collective expectations rather than enforced through formal authority.

Within climate negotiations, soft power is most visibly expressed through legitimacy and credibility. Because commitments under the climate regime are largely voluntary, perceptions of fairness, consistency, and responsibility carry significant weight. States that articulate their positions in ways that resonate with principles such as equity and inclusiveness are more likely to be regarded as



authoritative participants in multilateral forums. As Bernstein (2001) argues, legitimacy in global environmental governance derives primarily from normative alignment rather than material dominance.

Climate diplomacy also operates through institutional channels that extend soft power beyond rhetorical appeal. Nye emphasizes that institutions matter not only as sites of cooperation but as structures that shape agendas and constrain future choices over time (Nye, 2011). Leadership within climate-related institutions enables states to influence issue prioritization, modes of cooperation, and the diffusion of policy models, generating a more durable and cumulative form of influence.

In addition, climate diplomacy intersects with processes of norm entrepreneurship. Finnemore and Sikkink (1998) conceptualize norm entrepreneurship as efforts to promote new standards of appropriate behaviour and reshape collective expectations. In the climate context, sustained advocacy for principles such as equity, differentiated responsibility, and development-sensitive sustainability reflects attempts to influence the normative foundations of climate governance itself. As Acharya (2014) notes, norm diffusion often involves adaptation and reinterpretation, particularly within the Global South.

Taken together, these dynamics suggest that climate diplomacy constitutes a distinct modality of soft power operating through legitimacy-building, institutional positioning, and normative influence. In this study, this configuration is conceptualized as an advanced form of soft power, understood as an extension of Nye's framework that emphasizes agenda-setting and rule-shaping capacities rather than cultural attraction alone. At the same time, the translation of climate diplomacy into influence remains contingent, shaped by perception gaps, implementation challenges, and structural inequalities within the international system.

India's Climate Diplomacy: A Soft Power Potential

India, standing at the pedestal of high economic growth, having achieved the rank of 4th largest economy in the world, a civilization state with distinct culture, diaspora spread across the world has not only been exercising its soft power continuously but also trying to enhance it through various means. One such tool in present times which has emerged in veil of a crisis is climate action. A country which pushes for strong climate action in its foreign policy is proven to have a higher potential for projecting its soft power. This is primarily because of rising international agenda fostered by the communication revolution and the rise of social media which has created a wave of public awareness towards climate change (Kumar, 2023). Actions targeting sustainable development build perception of credibility among stakeholders that a nation is striving towards a better planet (Kumar, 2023). Major indices measuring soft power of nations from comparative perspective also include sustainable development actions as an important parameter for gauging perceptions about nations.

Expediency of Climate Action for India's Soft Power Potential

First of all, increasing global reputation of a nation brings high expectations globally as well as locally especially with regard to issues of international importance such as climate change and disasters associated with it (Singh, 2025). India's efforts such as Neighborhood First Policy, Act East Policy and Security and Growth for All in the Region(SAGAR) can be considered relevant in relation with latter as these have deepened bilateral and regional relations, increased economic cooperation and strengthened cultural ties. For instance, illegal wildlife trade forms a US\$23 billion industry only after arms, drugs and human trafficking. This is a trans-border nature conservation concern reaching India's doorstep with issues of



wildlife trafficking in Indo-Burma Biodiversity Hotspot (encompassing Northeast India, the Andaman Islands, South China, Myanmar, Thailand, Laos, Cambodia, Vietnam and Bangladesh) demanding severe need for regional collaboration (Singh, 2025). India, being the largest economy in the region, strongest democracy with stringent law enforcement and successful counter of wildlife related crimes under Wildlife Protection Act, 1972, is undoubtedly an important stakeholder in counter-trafficking actions.

Secondly, climate action is the need of the hour for the developing world especially analyzing from the prism of climate injustice. It is an undeniable fact that climate change at its present rate is scourging the entire world, but not alike! The low income, developing countries are the worst hit (Odeku, 2022). As per The World Bank Group, climate change will affect India multi-dimensionally by unleashing extreme heat, changing rainfall patterns, droughts, groundwater depletion, glacial melts, sea level rises, adverse effects on agriculture and food security, energy security, water security, health crises inducing migration and conflict. As per estimates, climate change can reduce India's GDP by 2.6% by the turn of century even if the temperature increase is capped below 2 degree Celsius. This depletion will accentuate to as high as 13.4% if temperatures keep rising (4 degree Celsius) (Sharma, Singh, Kathuria, 2021)

Thirdly, enhanced action in field of soft power can improve its rank in Global Soft Power Index

India & the Global Soft Power Index

Global Soft Power Index is an annual report published by Brand Finance to assess the soft power potential of 193 UN member states using Key performance indicators, eight soft power pillars subdivided into 35 nation brand attributes and recommendation measurement.

•Key Performance Indicators

- 1)Familiarity
- 2)Reputation
- 3)Influence

•Eight soft power pillars include 35 dimensions in which nations can exercise their soft power. These are mentioned in the following illustration:

8 Soft Power Pillars & 35 Nation Brand Attributes © Brand Finance Plc 2025							
Business & Trade	International Relations	Education & Science	Culture & Heritage	Governance	Media & Communication	Sustainable Future	People & Values
Strong and stable economy	Influential in Diplomatic circles	Advanced technology and innovation	Influential in arts and entertainment	Internationally admired government leaders	Affairs I follow closely	Invests in green energy and technologies	Trustworthy
Products and brands the world loves	Helpful to countries in need	Advanced in science	Food the world loves	Politically stable and well-governed	Easy to communicate with	Sustainable cities and transport	Generous
Easy to do business in and with	Good relations with other countries	Strong educational system	Great place to visit	High ethical standards and low corruption	Influential media	Acts to protect the environment	Friendly
Future growth potential	-	Invests in space exploration	Leader in sports	Safe and secure	Trustworthy media	Supports global efforts to counter climate change	Fun
-	-	-	Appealing lifestyle	Respects law and human rights	-	-	Tolerant and inclusive
-	-	-	Rich heritage	-	-	-	-



•Recommendation measurement

This indicator measures the possibility of a nation being recommended as a destination for tourism, investment, work, study or visit.

India ranked 30th in Global Soft Power Index, 2025, witnessing a drop by one rank falling from 29th to 30th among 193 member states sustaining a score of 49.8 out of 100, the same as 2024. Of the key indicators, special emphasis has been laid on India's score in the seventh pillar among the eight key pillars i.e. 'Sustainable Futures' in this research. In 2025, India secured 2.8 points in this pillar ranking 104th among all the countries. This flags a stark diversion from its overall rank highlighting that it fares badly when it comes to sustainable development. Additionally, a potential to improve its overall rank is also found to exist.

India can take example from Norway's performance which ranked 17th in the index securing 6.5 points in sustainable futures section in 2025. The country is global frontrunner in segments such as 'acts to protect the environment' and ranks among the top 5 for 'invests in green energy and technologies' and 'supports global efforts to counter climate change'. Norway's environment related actions underscore its Soft Power influence (Global Soft Power Index, 2024). India can also draw inspiration from the 2024 report which highlights a strong correlation ($r= 0.65$) between UN Sustainable Development Goals Index and Global Soft Power Index. This is supported by the finding that a nation's Sustainable future pillar score is highly correlated with national reputation with a high correlation coefficient of 0.93 (Global Soft Power Index, 2024, page 26).

Tools of Climate Action



India is pushing for position of leadership of Global South by power of example, power of resistance and power of institutional leadership shaping perceptions about its role (Kumar, 2023). By power of example is meant the effective climate mitigation policy of India that can be replicated by other countries of global south. Power of resistance refers to its push for climate justice and principle of Common But Differentiated Responsibilities (CBDR). Finally, power of institutionalization refers to various institutions being created or supported by India at multilateral level (Kumar, 2023). International Solar Alliance can be considered an effective example in this regard. A recent utilization of power of example and power of institutionalization being used together can be seen through the attempt of the Government of India to showcase PM-KUSUM (Pradhan Mantri Urja Suraksha evam Utthan Mahaabhiyan) program to several African countries and island nations through ISA platform. This announcement was made by Union Minister for Renewable energy Mr. Pralhad Joshi at a curtain-raiser event for ISA's eighth General assembly (The Hindu, October 9, 2025).

Moreover, India's strong cultural roots depicting nature as a mother figure and deep ecology approach are first among Nye's 3 core mechanisms of exercising soft power i.e. culture providing an alternative to mainstream climate solutions focusing upon shallow ecology. Other than this credit extension and tech transfers as tools of climate action are discussed at length in subsequent parts of the article.

India's Evolving Climate Finance Diplomacy

The climate finance strategy adopted by India has turned into a vital element in its foreign policy. It's a fact that India simultaneously puts pressure on rich countries to deliver more climate funding while emerging as a donor country itself, thus exhibiting its "dual identity" in climate talks worldwide. What this "dual identity" exactly implies is that India asks for equity and large amounts of climate finance to be given to vulnerable countries in global climate negotiations through its UNFCCC regime, but at the same time delivers its own financing to greenfield projects in other countries, "highlighting its responsibility through diplomacy and sustainable energy investments." That is, practically, India presents itself as both a voice representing the interests of developing countries and as a responsible international donor in climate finance.

Pioneering New Partnerships

New Delhi has reinforced this dual policy stand through its co-founding of new multilateral groups focused on climate issues. The International Solar Alliance (ISA), co-founded with France in 2015, is a major example. Based in India and with membership open to all sunshine-rich countries, its focus is upon mobilizing solar power investment in developing countries. The New Delhi government has pledged some \$1.4 billion in concessional credit to ISA projects and hence is effectively ISA's principal financier, excluding France. Crucially, only India has made large recurring contributions to the ISA's corpus and budget. Commentators note the geopolitical significance of this including that "India co-founded the ISA as an instrument for geopolitical influence in its own words... The ISA will bring over 100+ developing countries together on a new solar initiative, with the result that this enhances a sense of global public good supplied by a key player in South Asia."

Similarly, in 2019, India launched the Coalition for Disaster Resilient Infrastructure (CDRI), which aims at sharing expertise and funds for climate-resilient infrastructures. It has gained momentum with many governments and institutions as its members (about 46 as of 2024), focusing on roads and electricity infrastructures, among others. By controlling CDRI's decision-making organizations and



developing partnerships (for example, a joint India-US co-chairmanship during 2022-24), India is aiming to drive the global agenda on climate change finance. The ISA and CDRI provide India with tools through which coalitions can be built, technology can be exchanged, and new investment can be secured, all supporting its diplomatic relations through underpinning its status as a global climate leader.

Climate-Focused Development Finance

Along with multilateral moves, India is greening its bilateral development finance. Since 2000, India's government has extended over US\$32 billion in concessional lines of credit (LOCs) to over 68 partner countries for infrastructure projects. Lately, these LOCs cover renewable energy and/or resilience. At the ISA's founding conference, for example, India's Export-Import Bank agreed to 27 new solar LOCs worth US\$1.4 billion for 15 countries. About US\$1.0 billion of that was directed at African nations, reflecting New Delhi's emphasis on South-South cooperation in climate action. (India also promised roughly US\$2 billion of a US\$10 billion aid package to African leaders in 2015 for solar projects.) More recent steps tie Indian aid to solar rollout: India has pledged US\$25 million to the ISA's Global Solar Facility, and the ISA itself launched a US\$200 million Africa Solar Facility led by Africa50 to de risk solar investments.

They also cooperate on projects because, in late 2024, a group of banks from India facilitated a syndicated loan worth \$300 million to the Africa Finance Corporation, whose target projects are renewable energy schemes and infrastructure development projects. Thus, Indian development finance is serving a two-fold purpose by supporting green energy across the development landscape of other countries while at the same time enhancing its strategic relations with nations like Africa and Asia through its extensive soft power.

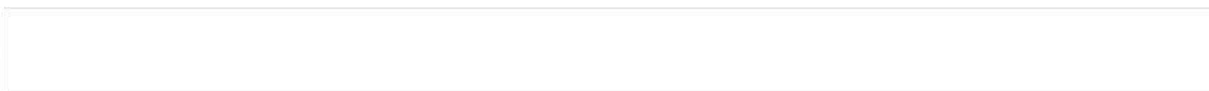
Soft Power and Geopolitical Payoff

These climate finance initiatives are not mere acts of charity; they are used as active diplomatic leverage. By placing itself in the role of donor for both climate and development assistance, India enhances its soft power and leadership credentials. As observers note, "environmental stewardship" has become "a powerful new dimension to India's influence". Hosting international organizations such as ISA, headquartered in India, or co-chairing CDRI, allows India agenda-setting power, enabling it to lead research, standards, and norms in emerging areas such as solar deployment and infrastructure resilience. While China does try to purchase influence through infrastructure finance, India tries to outmanoeuvre them by focusing on climate-friendly projects that resonate with the needs of developing countries. For instance, offering solar aid in return for access to critical minerals in Africa or rural renewables in India's neighbourhood enables New Delhi to claim a special role for itself—a large democracy assisting other countries in leapfrogging to clean energy. In practical terms, these efforts help New Delhi "buttress its role as a global powerhouse" and "widen its influence on partner countries".

India, Technology Transfer, and Soft Power

Climate technology encompasses innovations, products, and services aimed at reducing greenhouse gas emissions, improving energy efficiency, and enabling cleaner patterns of production and consumption. These technologies include renewable energy systems, energy-efficient infrastructure, wastewater recycling, green computing, and other applications designed to address the challenges posed by climate change. As climate governance increasingly emphasizes technological solutions, climate technology has emerged as a critical component of both mitigation and adaptation strategies.

India's engagement with climate technology has expanded alongside growing global concern over environmental sustainability. Investments in the development and deployment of climate technologies





have increased steadily, reflecting an effort to reconcile rising energy demand with environmental constraints. These initiatives are embedded within India's broader commitments under international climate frameworks and are frequently framed in terms of responsibility toward developing countries. In this context, climate technology functions not only as a domestic policy instrument but also as a diplomatic resource with external implications.

From a soft power perspective, technology transfer constitutes an important mechanism through which climate diplomacy can translate into international influence. Technology transfer refers to the dissemination of environmentally sound technologies and associated knowledge across borders through channels such as foreign direct investment, licensing arrangements, and collaborative ventures. Within the climate regime, technology transfer has acquired normative significance as a means of enabling equitable participation in global climate action. For technology-providing states, these exchanges may also enhance credibility, trust, and long-term partnerships, thereby contributing to soft power outcomes.

India's climate technology initiatives illustrate this linkage between technological cooperation and soft power. Programs such as the National Green Hydrogen Mission signal an attempt to position India as a producer and supplier of emerging clean technologies. The mission's projected outcomes including expanded renewable energy capacity, reduced fossil fuel imports, and emissions abatement—underscore its domestic significance. At the same time, the articulation of export potential and international collaboration situates the initiative within India's external climate engagement. Rather than serving purely economic objectives, such initiatives also shape perceptions of India's technological capability and policy commitment among developing countries.

Institutional engagement further reinforces this dynamic. India's leadership role in the International Solar Alliance (ISA) reflects an effort to promote collective solutions to energy access and climate mitigation challenges. The ISA's focus on mobilizing investment, reducing the cost of solar deployment, and facilitating technology access in developing regions highlights the institutional dimension of climate technology diplomacy. Through such platforms, India contributes to agenda-setting and capacity-building processes that extend beyond bilateral cooperation.

Technology transfer through these initiatives is frequently framed in developmental terms, emphasizing knowledge sharing, skill development, and local capacity rather than dependency. This approach aligns with India's broader emphasis on South-South cooperation and differentiates its climate engagement from more market-driven or conditional models. Support for off-grid solar projects in Africa and the diffusion of photovoltaic technologies across parts of Africa and Asia illustrate how climate technology cooperation can reinforce political relationships alongside economic exchange.

At the same time, the soft power effects of technology transfer are neither automatic nor uniform. The extent to which climate technology enhances influence depends on sustained implementation, accessibility, and alignment with recipient needs. While exports of renewable energy technologies generate economic benefits, their contribution to soft power is mediated by perceptions of reliability, inclusiveness, and long-term partnership. These conditions shape whether technology transfer is viewed primarily as commercial exchange or as a credible contribution to collective climate goals.

Overall, India's engagement in climate technology and technology transfer demonstrates how material capabilities can intersect with ideational and institutional forms of influence. By linking domestic clean energy initiatives with international cooperation, India positions climate technology as a component of its climate diplomacy. When embedded within norms of equity, development, and cooperation, technology transfer can function as a mechanism through which climate diplomacy contributes to soft power, particularly in relations with the Global South. However, these outcomes



remain contingent on consistent policy delivery and the ability to translate technological capacity into sustained trust and legitimacy.

Research Findings

1) How does India's Climate diplomacy serve as a mechanism of soft power in contemporary international relations?

India's climate diplomacy contributes to soft power by generating normative legitimacy within global climate governance. The analysis shows that India consistently frames climate action around equity, development priorities, and historical responsibility, particularly through the principle of common but differentiated responsibilities. This framing aligns with the concerns of many developing countries and positions India as a credible representative of the Global South. In Nye's terms, such legitimacy enables preference-shaping through attraction grounded in perceived fairness. However, the findings also suggest that this legitimacy remains fragile and contingent, as it depends on sustained coherence between India's international advocacy and its domestic climate performance.

2) Through which instruments- climate finance, institutional leadership and technology transfer- does India seek to translate climate action into international influence?

Climate finance functions as a central strategic instrument in India's soft power approach, primarily through credibility-building rather than material leverage. Through concessional lines of credit, multilateral contributions, and climate-related development finance, India seeks to demonstrate responsibility and solidarity with climate-vulnerable countries. The findings indicate that these financial engagements enhance trust and reinforce India's diplomatic standing, particularly in Africa and other regions of the Global South. At the same time, the predominance of loans over grants and the relatively modest scale of financial commitments limit the extent to which climate finance translates into enduring influence. On the other hand technological innovation and technology transfer emerge as complementary pathways through which climate diplomacy contributes to soft power. India's engagement in renewable energy technologies, particularly solar energy and emerging sectors such as green hydrogen, signals growing technical capability and policy seriousness. When technology transfer is accompanied by capacity-building and skill development, it strengthens relational trust and aligns with norms of South-South cooperation. Nevertheless, the findings highlight constraints related to scale, intellectual property regimes, and export-import imbalances, which restrict the broader soft power impact of technology-led engagement.

3) To what extent do these initiatives generate attraction and legitimacy among global south?

Institutional platforms play a critical role in amplifying the soft power effects of finance and innovation. Initiatives such as the International Solar Alliance and the Coalition for Disaster Resilient Infrastructure enable India to participate in agenda-setting processes, shape cooperation frameworks, and normalize particular approaches to climate solutions. In line with Nye's emphasis on institutions as carriers of durable influence, institutional leadership allows soft power to accumulate incrementally. However, this influence remains dependent on sustained financial resources and partner participation. India's constrained financial and manufacturing capacity restricts its institutional leadership in ISA. Overall, the findings demonstrate that India's climate diplomacy functions as a strategic but constrained form of soft power. Finance and innovation contribute to influence when embedded within credible narratives, institutional continuity, and normative alignment. Soft power outcomes remain relational, negotiated, and subject to structural and perceptual limits, rather than



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fixed or guaranteed. Furthermore increasing climate hazards and inadequate financing domestically raises concern about India's commitment to global climate negotiations and NDCs. These factors points to paradox of India's bid for a climate champion while struggling with monetary and implementation goals.

Limitations

One of the major limitations of the research done on soft power and ours too is the unconventional nature of soft power as a variable which attempts to defy objectivity and is difficult to measure and quantify. Soft power is often conceptualised in terms of greater recognition, legitimacy and leadership all of which is to a large extent subjective in nature and differs significantly in different discourses and narratives. At the same time, there is a lack of longitudinal studies and surveys across population and space to document public attitudes, responses and opinions about climate change and diplomatic responses to it. A key site of experiencing successful soft power narrative is positive public perception, greater legitimacy among masses and institutional leadership. There exist only few indexes which monitors and ranks states based on their soft power capacity. Brand finance's Global Softy Power Index is one such index which has recently began its operation and measures soft power on various parameters. This index has been used to analyse impact of climate action on soft power. However, data for various indicators could not be accessed as it was not available for public view. Hence, the scope of analysis of the index was limited to the variables cited in the study. Hence future academic scholarship can benefit from more frequent and systematic studies on soft power.

Conclusion

Taken together, the findings demonstrate that India's climate diplomacy functions as a soft power strategy not through symbolic engagement or reputational claims, but through the strategic deployment of climate finance, technological innovation, and institutional participation. The analysis shows that these instruments generate influence primarily by enhancing legitimacy, shaping agendas, and reframing expectations within global climate governance, rather than by creating material dependence. At the same time, the findings highlight that such influence remains conditional and uneven, shaped by financial constraints, implementation challenges, and perception gaps between international advocacy and domestic outcomes. These dynamics underscore the need to assess climate diplomacy as a contingent and process-driven form of soft power. The concluding section therefore reflects on the broader implications of India's climate diplomacy for understanding soft power strategies in an era where influence is increasingly exercised through finance, innovation, and normative engagement rather than coercive capabilities.

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