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COP-29 and India's Climate Diplomacy: Balancing Development and Sustainability

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Abstract: *The 29th Conference of the Parties (COP-29) to the United Nations Framework Convention on Climate Change (UNFCCC) arrives at a time when the global community is under pressure to accelerate climate action while ensuring equity and justice in environmental governance. For India, COP-29 presents a complex diplomatic terrain, where it must simultaneously address international expectations for climate leadership and domestic imperatives of economic growth and poverty alleviation. This article explores India's climate diplomacy at COP-29 through the lens of its longstanding commitment to the principles of equity, common but differentiated responsibilities (CBDR), and climate justice. It examines India's policy priorities—including climate finance, technology transfer, renewable energy expansion, and operationalising the Loss and Damage Fund—while also assessing challenges such as coal dependency, inadequate global finance mechanisms, and climate vulnerability. The article highlights how India's strategic positioning and leadership through initiatives like the International Solar Alliance (ISA) and Mission LiFE underscore its dual commitment to sustainable development and global environmental responsibility. In balancing development and sustainability, India seeks to redefine global climate diplomacy in a way that is inclusive, pragmatic, and rooted in the needs of the Global South.*

Keywords: *COP-29, Climate Diplomacy, India, Sustainable Development, Climate Justice.*

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Introduction

The 29th Conference of the Parties (COP-29) to the UN Framework Convention on Climate Change (UNFCCC), held in Baku, Azerbaijan from November 11 to 22, 2024, came at a critical time for global climate action[1]. As climate disasters become more common and severe, countries met at COP-29 to review their efforts to cut emissions, deal with climate impacts, and raise funds. For India, this was not just another meeting—it was a chance to balance two big goals: growing sustainably and helping solve global climate problems. India called for fair treatment of developing nations, more climate finance, and easier access to green technology. It also highlighted its progress in clean energy and environmental steps, showing how it plans to grow while protecting the planet.

Major Decisions of COP 29

COP29 achieved several historic milestones, including the formation of the New Collective Quantified Goal (NCQG) to scale up climate finance and notable advancements in carbon markets under Article 6 of the Paris Agreement. Some of the conference's most critical decisions include:

New Collective Quantified Goal (NCQG)

At the 29th United Nations Climate Change Conference (COP29) in Azerbaijan's capital Baku, a pivotal decision was made to found a New Collective Quantified Goal (NCQG) on climate finance. This goal requires developed nations to mobilise $300 billion yearly by 2035 to backing in climate action efforts in developing countries[2]. While this figure shows significant progress from the $100 billion yearly target set in 2009, it has been criticised for falling short of the $1.3 trillion each year that developing nations argue is needed to effectively combat climate change.[3] The allocated funds are estimated to come from both public and private sectors, with developed nations leading the effort and developing countries invited to contribute voluntarily.

The NCQG underscores the necessity of tripling annual disbursements from main environment funds, including the Global Environment Facility and Green Climate Fund, by 2030 relative to 2022 levels[4]. Despite the promises, many worry the pledged funds are too little and may arrive too late. Developing countries say the $300 billion goal isn't enough, and some doubt private sector money will truly reach the nations that need it most.

Carbon Market

At COP29, a historic treaty on carbon markets under Article 6 of the Paris Treaty was finalised, concluding nearly a decade of negotiations. The framework now permits bilateral carbon trading (Article 6.2) and the creation of a global crediting mechanism (Article 6.4), allowing nations to sell verified emissions reductions. This move is expected to mobilise billions in climate finance, particularly benefiting developing countries that lack sufficient resources to shift to low-carbon economies. While the adoption of Article 6.2 introduces transparency measures, concerns remain over weak enforcement mechanisms, potentially allowing low-quality carbon credits to enter the market. Meanwhile, Article 6.4 introduces stringent environmental and human rights safeguards, ensuring that projects adhere to scientific standards and receive prior consent from affected communities. It is projected that by 2030, the global carbon market could be worth over $100 billion annually[5], providing crucial

funds for climate adaptation and mitigation efforts worldwide. Despite the progress, challenges persist in implementing the new carbon trading framework. Critics argue that carbon markets, if not properly regulated, could lead to "greenwashing," where countries or corporations claim emissions reductions without making genuine efforts to cut pollution[6]. Nonetheless, COP29's decision lays the foundation for a more structured and accountable carbon market.

Mitigation

The Mitigation Work Programme (MWP) at COP29 saw little progress, as negotiations stalled over fundamental disagreements between developed and developing nations. Established at COP26 and formally adopted at COP27, the MWP was intended to accelerate mitigation efforts to keep global temperature rise below 1.5°C[8]. However, COP29 failed to introduce substantial new measures, largely due to opposition from developing countries against prescriptive language on coal phase-out, fossil fuel subsidies, and renewable energy transitions. The final agreement mirrored previous ones, focusing only on continued discussions without concrete commitments. Developed nations had pushed for high-level political messaging and stronger links between the MWP, the global stocktake, and Nationally Determined Contributions (NDCs), but this was met with firm resistance from China, the Like-Minded Developing Countries (LMDCs), and Saudi Arabia[9]. Consequently, the final COP29 draft omitted any references to stocktaking or fossil fuels, frustrating many nations seeking stronger mitigation commitments.

Adaptation

At COP29, adaptation gained renewed focus, with key discussions centering on finance, National Adaptation Plans (NAPs), and the Global Goal on Adaptation (GGA)[10]. A major breakthrough was the establishment of a support program for least developed countries (LDCs) to implement NAPs, aiming to accelerate climate resilience efforts. Ministers and financial experts convened in a high-level dialogue to push for innovative financing and technical support to meet the 2025 deadline for NAP submissions[11]. However, disagreements persisted, particularly over the inclusion of Means of Implementation (MOI), which developing countries strongly supported but was opposed by the European Union. While COP29 launched the Baku Adaptation Road Map to strengthen global efforts, adaptation finance remains significantly underfunded. Despite Germany pledging 60 million euros to the Adaptation Fund, total commitments of $124 million remain well below the $300 million annual target[12]. The conference also moved forward on discussions about adaptation indicators, with delegates supportive to create a set of 100 indicators to monitor development. However, concerns over "transformational adaptation" creating barriers for smaller adaptation projects led to heated debates[13].

Nationally Determined Contributions (NDCs)

At COP29, significant discussions were held regarding the next round of Nationally Determined Contributions (NDCs), set to be presented by February 2025 ahead of COP30. NDCs are crucial climate action plans where countries outline their commitments to mitigate climate change. The upcoming NDCs, known as NDC 3.0, will cover targets through 2035 and reflect the evolving global obligation to restraining global warming to 1.5°C.[14] Countries like

the UK, Brazil, and the UAE have already set ambitious 2035 targets, signalling strong climate action[15]. Some countries like Azerbaijan struggle to meet climate goals because they rely on fossil fuels. India highlighted the importance of climate finance for developing nations. COP29 showed progress, but more action is needed on adaptation and accountability.

Loss and Damage

At COP29 in Baku, significant progress was made in advancing the operationalization of the Fund for Responding to Loss and Damage (FRLD), with pledges totalling $731 million. However, this amount is still a portion of the estimated $724.43 billion needed yearly to address the economic and non-economic losses faced by developing countries due to climate change[16]. The FRLD, which is set to begin disbursing finance in 2025, remains underfunded, with much work left to ensure it can meet the urgent needs of vulnerable communities. A key milestone at COP29 was the signing of three critical documents: the Secretariat Hosting Agreement, the Trustee Agreement, and the Host Country Agreement. While Sweden pledged an additional $19 million, it highlights the gap in funding, which must be scaled up significantly[17]. The inclusion of displacement and migration in the Fund was an important move, but it's still hard to measure loss and damage and fully understand their effects.

Transparency

At COP29, transparency in climate action took significant strides, particularly with the submission of the first Biennial Transparency Reports (BTRs) by 13 countries, including Andorra, Azerbaijan, and the European Union[18]. These reports are key to tracking progress on emissions, climate policies, and finance, helping build trust and drive more climate action. At COP29, countries agreed on new tools and support under the Enhanced Transparency Framework (ETF), and launched the Baku Global Climate Transparency Platform to boost cooperation. However, Azerbaijan, the host, faced criticism for corruption and jailing environmental activists. Still, COP29 showed that transparency remains vital for meeting global climate goals, especially for developing nations.

India's Climate Diplomacy: Core Principles and Evolution

The 29th Conference of the Parties (COP29) marked a crucial moment in global climate negotiations, particularly for India. India played a pivotal role in shaping discussions on climate finance, mitigation, adaptation, and equitable climate action. India's climate diplomacy is built on several foundational principles:

Equity and Common But Differentiated Responsibilities (CBDR)

India's stance at COP-29 in Baku was firmly rooted in the principle of Common But Differentiated Responsibilities (CBDR), asserting that developed countries must acknowledge their historical responsibility for global warming. India, the third-largest emitter today, emphasizes that its per capita emissions remain significantly lower than those of the developed world. For instance, 48 sub-Saharan African countries together contribute only 0.55% of global emissions, whereas India manages to sustain its large population and development goals with far fewer emissions per capita than the global average.[19] At COP-29, India strongly objected to the imposed $300 billion annual climate finance goal, highlighting that it failed to reflect

the actual financial needs and historical accountability of developed nations. India and other developing countries advocated for a fairer framework, linking contributions to historical emissions—a proposal rejected by many developed nations, illustrating the continued struggle for climate justice.

Climate Justice

Climate justice demands fair treatment of nations unequally responsible for climate change but equally, or more, vulnerable to its impacts. At COP-29, India strongly emphasized that the developing world, especially the Global South, continues to suffer due to the broken promises of climate finance. According to the OECD, only $25.6 billion in climate-related grants reached developing countries in 2022, far short of their $441–900 billion needs by 2035. India, representing the Global South, rejected the NCQG agreement gavelled at COP-29, asserting that justice must include adequate, grant-based finance aligned with historical responsibilities.[20]

Panchamrit Commitments

At COP-26 in Glasgow, Prime Minister Narendra Modi presented India's climate action roadmap through the "Panchamrit" commitments. These include achieving net-zero carbon emissions by 2070, fulfilling 50% of the country's energy needs through renewable sources by 2030, and increasing the non-fossil fuel energy capacity to 500 GW.[21] Additionally, India pledged to reduce its total projected carbon emissions by one billion tonnes and cut the emissions intensity of its GDP by 33-35% from 2005 levels by 2030.[22] These steps reflect India's balanced approach to sustainable development, climate responsibility, and the pursuit of green growth.

Energy Transition with National Sovereignty

India's energy transition diplomacy emphasises national sovereignty, advocating for voluntary, non-binding climate actions through Nationally Determined Contributions (NDCs). Rejecting externally imposed targets, India asserts its right to chart a development-centric path. At COP29, India updated its NDCs, reaffirming goals such as 500 GW of non-fossil fuel capacity by 2030. Despite being the world's third-largest emitter, India's per capita emissions remain low at 2.29 tonnes compared to the global average of 6.3 tonnes. India objected to the NCQG's $300 billion climate finance goal by 2035, against the estimated $6.852 trillion needed by developing nations.[23]

India's Key Priorities at COP-29

India's key priorities at the summit were anchored in equity, climate justice, and sustainable development. Below is a summary of the major priorities India pursued during COP-29:

1. **Climate Finance and Technology Transfer**

At COP29, India reiterated its long-standing demand for clear, accessible, and adequate climate finance from developed nations. It strongly criticized the newly approved New Collective Quantified Goal (NCQG) of $300 billion annually by 2035 as insufficient and delayed, falling short of the $1.3 trillion India deems necessary.[24] India called for clear rules on climate finance, asking for grants instead of loans. It stressed the need for technology transfer to

boost clean energy and urged rich countries to commit to helping developing nations through training and innovation support.

2. Operationalizing the Loss and Damage Fund

India has been a strong advocate for the operationalisation of the Loss and Damage Fund, particularly due to its vulnerability to climate-induced disasters. The Global Climate Risk Index 2021 ranked India as the 7th most impacted country by climate change.[25] These climate-induced events include frequent floods, droughts, and cyclones, which underscore India's urgent need for financial mechanisms to address these losses and damages. At COP29, India's negotiator, Chandni Raina, emphasized the necessity of developed countries fulfilling their financial responsibilities. This was in response to what India perceived as insufficient funding commitments from wealthy nations. India criticized the outcomes, labeling the funding goals as "abysmally poor" and inadequate to meet the actual needs of climate-vulnerable countries.[26] India's stance is that the Loss and Damage Fund must be operationalised with clear governance structures, ensuring that financial support reaches the countries most affected by climate change. India has reiterated the principle of Common but Differentiated Responsibilities (CBDR), insisting that wealthier nations bear a larger share of the responsibility in providing financial assistance.

3. Advocating for Just and Inclusive Energy Transition

India's participation at COP29 emphasised a just and inclusive energy transition aligned with its development needs. With coal still providing over 55% of India's electricity and employing millions, transitioning rapidly poses socioeconomic risks. India's per capita carbon emissions remain low at 2.29 tonnes, compared to the global average of 6.3 tonnes, underscoring its equitable climate stance.[27] At COP29, India pushed for differentiated transition pathways, highlighting the need for $1.3 trillion annually in climate finance, including $600 billion in grants.[28] India also advocated for global cooperation in expanding renewable energy, notably solar, and green hydrogen technologies to secure energy access while ensuring employment safeguards.

4. Enhancing Global South Solidarity

At COP-29, India reaffirmed its leadership role in fostering Global South solidarity by advancing inclusive climate action and equitable partnerships. India promoted South-South cooperation through key initiatives such as the International Solar Alliance (ISA) and the Coalition for Disaster Resilient Infrastructure (CDRI), supporting renewable energy adoption and climate-resilient development in vulnerable nations. India strongly advocated for robust technology transfer and capacity-building mechanisms, emphasizing the urgent need for developed countries to fulfill their commitments under the Paris Agreement. Calling for transparent and unconditional financial flows, India demanded $1.3 trillion annually by 2030, with $600 billion in grants, to ensure effective climate action in the Global South.[29] Through these actions, India seeks to bridge the North-South divide and empower developing nations with resources, technology, and strategic leadership.

Balancing Act: Development vs. Sustainability

India, a rapidly growing economy, seeks to eradicate poverty and boost infrastructure to achieve its $5 trillion goal. However, it faces mounting ecological challenges—pollution,

biodiversity loss, land degradation, and climate vulnerability. Balancing economic progress with environmental sustainability is now a critical and urgent national priority.

The Development Imperative

India's economy is one of the fastest-growing globally, and its developmental challenges are immense. Notably, over 190 million Indians still live in multidimensional poverty[30]. In 2023, India was the world's third-largest primary energy consumer at 39.02 exajoules (EJ). However, its per capita energy consumption stood at just 27.3 gigajoules (GJ) in the same year, considerably lower than China's 120 GJ and the USA's 277.3 GJ, and below the global average of 77 GJ.[31] This highlights a substantial energy access gap despite overall growth. Urbanization, industrialization, and infrastructure development are crucial for inclusive growth, aligning sustainable development with poverty elimination and improved well-being. For India, sustainable development must align with eliminating poverty, improving health and education, and building resilience.

Environmental Sustainability Goals

Despite these challenges, India has demonstrated significant progress in its environmental sustainability goals. In renewable energy, the installed capacity has reached 220.10 GW as of March 2025, a substantial increase from the reported over 180 GW in 2024, and the nation is on track to achieve its ambitious 500 GW target by 2030.[32] Furthermore, afforestation efforts have expanded India's forest and tree cover to 25.17% of its geographical area.[33] On the international stage, India actively promotes sustainable practices through initiatives like the International Solar Alliance (ISA) and Mission LiFE (Lifestyle for Environment), advocating for global adoption of environmentally conscious living.

Bridging the Divide

India adopts a synergistic, rather than binary, approach to sustainable development, integrating green urbanization, rural solar electrification, energy-efficient transport, and clean cooking fuel initiatives to balance growth with environmental responsibility. With a targeted $4 trillion investment in urban infrastructure by 2030, efforts in green urbanization are gaining momentum.[34] Rural solar electrification has brought power to over 25 million households, while the push for energy-efficient transport envisions 30% electric vehicle adoption by 2030.[35] Clean cooking fuel programs have reached more than 80 million households, significantly enhancing women's health and well-being.[36] By framing these initiatives as scalable solutions for other developing nations, India uses climate diplomacy not only to address environmental challenges but also to strengthen its geopolitical influence on the global stage.

Major Challenges in India's Climate Diplomacy

India's climate diplomacy, though increasingly assertive and innovative, faces several major challenges that complicate its efforts to balance development goals with environmental responsibilities. These include:

1. **Coal Dependency:** India heavily relies on coal, with 79% of its total energy generation coming from coal in 2023-24.[37] While aiming for 500 GW of non-fossil fuel capacity by 2030[38], the transition poses challenges to energy access and employment for the 4.78 lakh individuals directly employed by the coal sector.[39]

International pressure at COP-29 for accelerated phase-out timelines could exacerbate these domestic concerns.

2. **Climate Finance Ambiguities:** India requires an estimated USD 2.5 trillion by 2030 to meet its climate goals , yet current green finance flows cover only about a third of this.[40] Ambiguities in the definition and accounting of climate finance by developed nations persist, alongside scrutiny over India's capacity to absorb and utilize large-scale green funds effectively.
3. **Balancing Global Expectations and Domestic Realities:** India faces the complex task of aligning international pressure for emission reductions with its domestic development priorities. This balancing act often invites criticism from both environmental advocates and economic stakeholders, as the nation strives for growth while addressing climate change.
4. **Vulnerability to Climate Impacts:** India is highly vulnerable to climate change, having reported 80,000 lives lost and nearly USD 180 billion in economic damages from extreme weather events between 1993 and 2022.[41] Over 85% of Indian districts are prone to climate extremes like floods, droughts, and cyclones[42], necessitating significant international support for adaptation and resilience-building.

Conclusion

Despite significant challenges, India's participation at COP-29 highlights its growing role as a proactive and principled force in global climate diplomacy, striving to balance development goals with environmental sustainability. As a country working to eradicate poverty while facing increasing climate risks, India has emerged as a key advocate for the Global South, promoting principles of equity, historical responsibility, and climate justice. Its strong call for climate finance and technology transfer emphasized the urgent need for developed nations to support the climate efforts of developing countries. India's leadership extended beyond negotiations through active participation in initiatives like the International Solar Alliance and the LeadIT Summit, showcasing a commitment to collaborative, scalable solutions. The adoption of global carbon market rules presents an opportunity for India to expand its carbon trading system and attract green investments. Ultimately, India's credibility will depend on how effectively it converts diplomatic progress into tangible domestic action aligned with its international climate pledges.

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