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KYOTO TO COP29: READING INDIA'S RESPONSES TO CLIMATE ACTION

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Since 1997, countries have been diligently adopting measures to overcome the disastrous impact of climate change through agreements, conferences, declarations, and pledges starting from Kyoto Protocol to COP29, which concluded recently. As we move forward to 2025, India and other developing countries are at a crucial juncture having to stand tall against the Global North in reminding them of their historical responsibilities to compensate developmental damages the climate commitments pose on the Global South while resiliently pursuing climate actions for sustainability. The paper proposes to attempt a detailed review of the international climate actions from Kyoto Protocol to COP29 and assess India's responses to them.

Keywords: Climate change, Kyoto Protocol, Paris Protocol, COP28, COP29, India's climate actions

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Climate change, driven by the relentless increase in greenhouse gas emissions, is one of humanity's most pressing challenges. Its impacts are widespread and profound, affecting ecosystems, weather patterns, and human societies across the globe. Rising temperatures, more frequent and severe weather events, and shifting climatic zones disrupt lives and livelihoods, especially in vulnerable regions. With more than half of the global GDP dependent on natural resources, it is no exaggeration that biodiversity degradation has emerged as a precarious global threat in the Global Risks Report 2024 of World Economic Forum (WEF, 2024).

As one of the world's fastest-growing economies and a significant emitter of greenhouse gases, India plays a crucial role in the global effort to mitigate climate change. Over the decades, India has repeatedly pledged to contribute substantially to the global fight against climate change, ensuring a resilient and sustainable future for its people and the planet. Currently, we are at a crucial juncture of economic growth and social development necessitating calculated discourses engaging international and domestic stakeholders, including the private sector, in formulating clear visions for a sustainable future in all respect standing tall and resilient against the Global North.

This paper aims to evaluate how far India has succeeded in embracing sustainable development practices, advancing renewable energy initiatives, and committing to ambitious climate goals. The assessment is being initiated in light of COP28, and the paper intends to understand the country's progress in meeting the commitments of the Conference in the past six months. Firstly, we will discuss the objectives and distinguishing features of COP28 & the newly concluded COP29, then address the progress made by India towards this end, and finally, examine the future of India's climate solutions.

KYOTO to COP29: Steering the New Phase of Global Climate Solutions

The world just witnessed the conclusion of the 29th Conference of Parties (COP29) to the United Nations Framework Convention on Climate Change (UNFCCC), which is a crucial continuation of the COP28, together marking a critical juncture in the global effort to combat climate change. While COP29 was held in Baku, Azerbaijan, from 11 to 22 November 2024, the COP28 was held in Dubai, UAE, from November 30 to December 12, 2023. Both COP28 and COP29 made significant advancements in climate policy, finance, and implementation strategies. It is interesting that India has actively participated in these conferences and has recently pledged sincere efforts to mitigate climate damage and engage in climate action. The core focus of this paper is to assess these responses to global initiatives in climate action., towards this purpose let us first attempt to historically situate the relevance of these conferences, which are basically a continuation of various international climate negotiations spanning over three decades, let us attempt a brief glance at all these earlier efforts starting with the historical Kyoto Protocol, Paris Agreement and beyond.

The Kyoto Protocol is an international treaty adopted on December 11, 1997, in Kyoto, Japan, and entered into force on February 16, 2005. It was established under the United Nations Framework Convention on Climate Change (UNFCCC) to reduce greenhouse gas emissions and combat global warming. The Protocol commits its signatories, primarily developed countries, to legally binding emission reduction targets, recognizing their more outstanding historical contribution to the accumulation of greenhouse gases in the atmosphere. The relevance of the Kyoto Protocol lies in its pioneering role in setting legally binding commitments for emission reductions, thus providing a crucial framework for international cooperation on climate change. It also introduced flexible mechanisms, such as emissions trading, the Clean Development Mechanism (CDM), and Joint Implementation (JI), which aimed to help countries cost-effectively meet their targets. Despite its limitations, including the non-participation of major emitters like the United States and the lack of binding commitments for developing countries, the Kyoto Protocol laid the groundwork for subsequent international climate agreements, including the Paris Agreement (United Nations, 2022; UNFCCC, n.d.).

COP28 and COP29 are a continuation of a series of pivotal conferences, including COP21 in Paris, where the historic Paris Agreement was adopted, and subsequent COPs seeking to operationalize and enhance the agreement. The Paris Agreement was created in response to the urgent need to address climate change, which threatens natural ecosystems, human health, and economic stability. It marks a significant shift in global climate action by emphasizing cooperation, transparency, and national responsibility. The agreement aims to limit global warming to below 2°C above pre-industrial levels, ideally capping the rise at 1.5°C. Achieving this goal requires significant reductions in greenhouse gas emissions, building resilience, and helping nations adapt to the unavoidable impacts of climate change (UNFCCC, n.d.).

Unlike the top-down approach of the Kyoto Protocol, the Paris Agreement adopts a more inclusive and flexible framework, emphasizing national sovereignty and allowing countries to set their targets. This framework has encouraged innovation and investment in clean technologies, renewable energy, and sustainable practices. The agreement has sparked climate action across various sectors, including cities, regions, businesses, and civil society. Its success depends on the collective efforts of

nations and non-state actors to achieve long-term climate stability and resilience (Maizland, 2023).

Following COP21, the subsequent conferences, from COP22 in Marrakesh to COP25 in Madrid, focused on implementing the Paris Agreement. COP22 emphasized the importance of immediate action and adaptation strategies, especially for vulnerable nations. COP23, hosted by Fiji and held in Bonn, Germany, continued this work by advancing the Talanoa Dialogue, a process for reviewing and increasing NDC ambitions. COP24 in Katowice, Poland, was critical in finalizing the "Katowice Rulebook," which provides guidelines for implementing the Paris Agreement. This included details on transparency, NDC reporting, and the global stocktake process. COP25, known as the "Chile Madrid Time for Action," struggled with negotiations on carbon markets and the rules for international carbon trading under Article 6 of the Paris Agreement.

COP26, held in Glasgow in 2021, was pivotal for global climate action. The conference saw the launch of the "Glasgow Climate Pact," which called for a phase-down of coal and fossil fuel subsidies and urged countries to submit more ambitious NDCs by 2022. Notable achievements included commitments from various countries to reach net-zero emissions by mid-century, pledges to end deforestation, and significant financial commitments to support climate adaptation and mitigation efforts. At COP26 the United States and the EU proposed the Global Methane Pledge for reducing emissions by 2030. COP27 in Sharm El-Sheikh, Egypt, continued to emphasise implementing the Paris Agreement. The conference highlighted the importance of addressing loss and damage, particularly for countries most affected by climate change. It also focused on the need for more robust financial mechanisms to support developing nations, reaffirming the commitment to mobilize $100 billion annually in climate finance (Maizland, 2023).

COP28, hosted by the United Arab Emirates in 2023, brought a renewed focus on accountability and transparency in climate action. In addition, COP28 saw increased engagement from non-state actors, including businesses, cities, and civil society, reflecting a broader societal commitment to addressing climate change. It had the biggest-ever attendance of 65,000 core participants. The conference also highlighted technological innovations and partnerships as critical tools for achieving climate goals. The outcomes of COP28 are expected to shape the trajectory of international climate action and determine our collective ability to address the pressing challenges of climate change (COP28-UAE, 2023, UNFCCC, 2024).

COP29, the 29th Conference of the Parties to the UN Framework Convention on Climate Change, took place in Baku, Azerbaijan, from November 11th to 22nd, 2024. COP29 is considered a continuation or culmination of the objectives of COP28, especially in terms of climate finance, which is largely aimed at climate justice. The main difference between COP28 and COP29 is that COP28 focused on transitioning away from fossil fuels, while COP29 focused on climate finance and stronger targets, aimed to increase funding for developing countries to address climate change. COP29 has emerged as a strong reminder of the 'common but differentiated responsibilities principle which defines climate justice as 'those who have contributed more to the problem assume a greater responsibility for solving it'. The following section explores the key objectives and themes of COP28 and COP29.

Key Objectives & Themes of COP28

Enhanced Nationally Determined Contributions (NDCs):

A central focus of COP28 was the enhancement of Nationally Determined Contributions (NDCs). NDCs are critical components of the Paris Agreement, outlining each country's plans to reduce greenhouse gas emissions and adapt to climate change. These contributions are tailored to national circumstances and include mitigation and adaptation strategies. NDCs are updated every five years, encouraging progressively stronger commitments. COP28 called for more ambitious Nationally Determined Contributions (NDCs) due to the growing urgency of the climate crisis, more importantly, driven by the realisation that the window for effective climate action is closing rapidly. Current climate actions and commitments are insufficient to limit global warming to the Paris Agreement's targets of well below 2°C, ideally keeping it to 1.5°C above pre-industrial levels.

Countries have been urged to submit updated NDCs capable of strengthening the adaptation measures, bridging the gap between current commitments and the targets to meet the Paris Agreement goals. This includes reducing greenhouse gas emissions, transitioning to renewable energy sources, and implementing sustainable practices across various sectors (UNFCCC, 2024).

Climate Finance:

Climate finance, according to UNFCCC, refers to the funding provided by developed countries to assist developing nations in mitigating and adapting to climate change's impacts. At COP meetings, discussions on climate finance focussed on mitigation, adaptation, capacity building, technology transfer, and loss and damage. Climate finance remains a contentious issue in international climate negotiations. As per the decision taken in Copenhagen Accord and reaffirmed in COP15 in 2009 and by Cancun Agreement 2010, developed countries pledged to mobilise $100 billion annually by 2020 to support developing nations' climate efforts. The Green Climate Fund (GCF) was established to coordinate the initiative (Hindustan Times, 2023).

OECD has found that by 2022, $115.9 billion was raised. Approximately 66% of the funds distributed among middle-income countries and least-developed countries were utilised for mitigation, and it was criticised that only 25% had been set aside for adaptation. Until 2018, middle-income countries were allotted nearly 70% of the total finance, depriving the least-developed and small island developing states (SIDS) of substantial funds for mitigation and adaptation (Hindustan Times, 2023).

80% of the climate finance was sourced from local, national, bilateral, or multinational public sources. These include GCF, Adaptation Fund, Climate Investment Funds (CIF) of the World Bank, governments, and other international financial institutions. However, the 2015 Paris Agreement discussed the notable lack of private-sector funding, and it was decided to initiate drastic measures to attract more private-sector engagement. The shortfall was partly due to the perceived risks and lower returns associated with climate-related investments in developing countries. The private sector tends to focus more on areas with straightforward financial returns, which often do not align perfectly with the needs of climate adaptation and mitigation projects in less economically attractive markets.

Barriers to greater private sector participation include inadequate policy

frameworks, a lack of investment-grade projects, and insufficient risk mitigation instruments. Many developing countries also lack the financial infrastructure and regulatory environments necessary to attract significant private investment in climate projects. COP28 aims to address this shortfall and explore new mechanisms to scale up the mobilisation of private finance and adaptation finance through innovative financing approaches.

Another drawback noted by experts is the inconsistencies in calculating the country-wise finance requirements. There have also been problems in gauging the equity-common but differentiated responsibility (Hindustan Times, 2023).

Adaptation and Resilience:

Adaptation and resilience gained prominence on the COP28 agenda with the increasing frequency and severity of climate-related disasters. The conference sought to strengthen support for vulnerable communities and ecosystems, promote climate-resilient infrastructure, and enhance early warning systems. Additionally, COP28 stressed the importance of integrating climate considerations into urban planning and development, promoting the use of green infrastructure, and enhancing early warning systems for natural disasters. This includes improving access to climate information and technology, fostering community-based adaptation initiatives, and supporting the sustainable management of natural resources. The discussions underscored the need for increased and predictable funding to support these efforts and enhanced international cooperation and knowledge sharing, such as, Green Climate Fund, Least Developed Countries Fund and Special Climate Change Fund. The Global Goal on Adaptation (GGA) to control rise of global temperature under 1.5 degree Celsius, was established at Paris Agreement, and was further elaborated at COP26 and COP28, focusing on creating concrete metrics and benchmarks to track progress and ensure effective implementation (UNFCCC, 2024).

Loss and Damage:

The issue of loss and damage, which refers to the irreversible impacts of climate change that cannot be mitigated or adapted to, is a critical concern for many developing countries. The discussion around loss and damage gained prominence at COP15 in Copenhagen in 2009. The Warsaw International Mechanism for Loss and Damage (WIM) was established at COP19 in 2013. COP21 in Paris in 2015 marked a significant step, including a dedicated article on Loss and Damage (Article 8) in the Paris Agreement. OP28 has been pivotal in advancing the agenda on loss and damage. COP28 aimed to advance discussions on funding arrangements and mechanisms to address loss and damage, ensuring that affected communities receive adequate support. The “Loss and Damage Fund” prioritizes support for the most vulnerable countries, particularly Small Island Developing States (SIDS) and Least Developed Countries (LDCs) (UNFCCC, 2024).

Global Stocktake:

One of the most important developments of COP28 has been the first Global Stocktake (GST), a comprehensive review mechanism of collective progress toward achieving the long-term goals of the Paris Agreement. Envisaged to be conducted every five years, this process aimed to provide valuable insights into the effectiveness

of current policies and identify areas where enhanced action is needed. Before advancing the discussion further, it is ideal that we gain sufficient knowledge about the Global Stocktake, its objectives, and outcomes to establish a clear trajectory for COP28 and India's initiatives for climate solutions.

First Global Stocktake: Objectives & Outcomes

The Global Stocktake (GST) is a mechanism established by the Paris Agreement to periodically assess Parties' collective progress toward achieving the Agreement's long-term goals, particularly in limiting global temperature rise, enhancing adaptive capacity, and mobilizing finance. The GST is envisaged to be conducted every five years, allowing countries to reflect on their individual and collective efforts. The process involves reviewing national climate actions, identifying gaps, and informing future updates to Nationally Determined Contributions (NDCs).

The first Global Stocktake (GST) at COP28 holds significant importance for several reasons. It involved inputs from various stakeholders, including countries, scientific bodies, civil society, and the private sector, to provide a holistic picture of the global response to climate change. It enhances accountability and transparency by providing a clear picture of global progress in climate action, helping to understand where the world stands. The GST also plays a crucial role in guiding future actions by informing countries about the effectiveness of their policies and actions, thereby guiding future efforts to enhance ambition. Additionally, the GST fosters international cooperation by highlighting areas where collective action can be strengthened, encouraging countries to work together towards common climate goals.

Sectoral insights from the GST show that while the shift to renewable energy is underway, coal, and other fossil fuels still dominate the energy mix in many countries. Sustainable agricultural practices and reforestation efforts have shown promise but must be scaled up. Decarbonizing the industry and transport sectors remains challenging and requires more aggressive policies and innovations. Current emission trajectories are insufficient to meet the 1.5°C target, indicating that global emissions must peak and decline much faster. Furthermore, there is a significant gap in climate finance, particularly for developing countries, which hampers their ability to implement necessary climate actions. Adaptation efforts are also lagging, with many vulnerable communities facing increasing climate impacts without adequate support.

The GST highlights the need to invest more in resilient infrastructure, supporting vulnerable communities, and integrating adaptation into national planning processes. Advancements in technology and innovation are critical for achieving climate goals. Governments should foster research and development, support deploying clean technologies, and facilitate knowledge sharing. Lastly, the GST emphasizes the importance of international cooperation. Countries must collaborate to share best practices, support each other's efforts, and build a cohesive global response to climate change (UNFCCC, 2024).

Declaration on Climate and Health

COP28 stood out for another historic decision. December 3, 2023, was conducted as the first ever Health Day and climate-health ministerial at COP28 to address the global health landscape and its interlinkages with climate, the first time in the 28 years of climate change negotiations; the outcome was the Declaration on Climate

and Health. It has been welcomed as a significant milestone set by COP28. The declaration is a comprehensive response to the health impacts of climate change and proposes a shared action plan for integrated actions against exacerbating climate change-induced health risks globally. The common objectives were to strengthen policies to maximise the health gains from mitigation and adaptation actions, implement a One Health approach to address the environmental determinants of health, combat inequalities among countries, and accelerate the achievement of Sustainable Development Goals (SDGs), etc (Wyns, 2024). The declaration calls for steps to ensure that countries commit to climate-resilient health systems and promote health co-benefits of climate action. The declaration calls on countries to incorporate health considerations into their NDCs and further advocates global collaborations toward robust monitoring and reporting mechanisms. The declaration invoked mixed responses from the stakeholders. Endorsed initially by 123 governments, over 40 financing partners, and civil society organisations, 151 countries have signed the declaration so far. The signatories include the United States, the European Union, Latin America, North African, and East African countries (Kalia, 2023).

Key Objectives & Themes of COP29

COP29 brought together political leaders, businessmen, scientists, activists, and common people to discuss and decide on the aspects concerning climate finance and other agreements. As stated by COP29 President, Mukhtar Babayev, the conference focussed on two key themes, namely, 'enhancement of ambition and enabling of action'. key objectives:

New Collective Quantified Goal on Climate Finance (NCQG)):

COP29 primarily anchored its discussions to build consensus on tripling the compensatory financial support to developing countries to USD 300 bn annually by 2035. Also, it was decided to increase public and private contributions to USD 1.3Bn per year by 2035. These new financial goals were a bold step arrived at after much concerned efforts and is a just attempt to protect the vulnerable communities and countries from climate disasters. It is in line with the COP27 Loss and Damage Fund and COP28 fuel transition plans (Falduto et.al., 2024).

Agreement on Carbon Markets:

The Conference also made commendable progress on the long-deliberated yet inconclusive Paris Agreement Crediting Mechanism envisaged in Article 6 of the Agreement. The COP29 arrived at clarity on how to operate country-to-country trading of carbon credits (Article 6.2) and defined the standards for a centralised carbon market (Article 6.4). The mechanism necessitates 'mandatory checks' to ensure environmental safeguards in any project and, further, consent from Indigenous people (Diab, 2024).

Transparent Climate Reporting:

The Biennial Transparency Reports (BTRs) due at the end of the year according to COP28, are intended to help generate data on climate change, useful for planning climate policies, investment diversification, fund utilisation etc. Although only 13 Parties submitted the BTR until COP29, the Baku Transparency Platform (BTP) is a

promising initiative encouraging countries to share their experiences in collecting and processing evidence towards the preparation of the report. The Enhanced Transparency Framework (ETF) reporting tools were also finalised, and training sessions organised under #Together4Transparency for equipping countries to prepare NDCs and net-zero pathways (UNFCCC, 2024c).

National Adaptation Plans (NAPs):

COP29 also stood out for convening a high-level dialogue on NAPs, exclusively for representatives from least-developed countries and small island states to gather financial and technical support from donors and experts for facilitating accelerated climate action (UNFCCC, 2024d). Another initiative was the Baku Adaptation Road Map intended to speed-up the implementation of the UAE Framework.

Baku Workplan & Facilitative Working Group of the Local Communities and Indigenous Peoples Platform:

Another promising outcome has been the adoption of the Baku Workplan towards enhancing knowledge exchange among local communities and Indigenous people through the Facilitative Working Group (FWG). The aim is to integrate the potentials of diverse knowledge systems also into the climate actions adopted by countries. COP29 facilitated dialogues to address the challenges faced in effective participation of Indigenous communities in UNFCCC projects (UNFCCC, 2024b).

Enhanced Lima Work Programme on Gender and Climate Change:

The Conference extended the enhanced Lima Work Programme on Gender and Climate Change for 10 more years, acknowledging the significance of ensuring gender balance and gender responsiveness in climate action. A new gender action plan was also developed. The Lima Work Programme was established in 2014 and was extended for three years in COP22 and the first Gender Action Plan (GAP) was established at COP23. Subsequent to the review at COP25, a 5-year enhanced Lima work programme and enhanced GAP was adopted, which has now been extended to 10 years. The enhanced GAP identifies five priority areas for achieving gender-responsive climate action (UNFCCC, 2024a).

Civil Society Participation:

COP29 stood out from earlier Conferences in terms of active participation by civil society, Indigenous people, children, youth etc. Children as young as 10 years old participated, opening up possibilities of intergenerational collaboration toward fruitful Action for Climate Empowerment. The 2024 Yearbook of Global Climate Action, launched at COP29, is specially intended to direct non-Party stakeholders towards achieving the climate goals.

To summarise the outcomes of COP29, the Conference succeeded in constructing collective consensus or unanimity to triple the finance to developing countries, protect lives and livelihoods, while adopting stringent measures to reinforce the plausible solutions to achieve climate control (UNFCCC, 2024d).

In the following sections, this paper will evaluate India's climate commitments and strategies since COP21. The terms and conditions of the Paris Agreement are pretty ambitious, and its implementation has faced numerous challenges, including

overwhelming national commitments, financial constraints, etc. In the following section, let us understand how India has managed to meet the situation.

India's Climate Commitments and Strategies: Kyoto to Paris

India is the world's third-largest emitter of greenhouse gases, following China and the United States. In 2020, India's total GHG emissions were approximately 3.3 billion metric tons of CO, equivalent. The power sector accounts for about 37% of the total emissions; agriculture contributes approximately 21% through methane emissions from livestock and rice paddies; industry and manufacturing account for around 17%; transportation sector 9%, and waste emits 3%. In other words, India's emissions profile is characterized by its reliance on coal for electricity generation, which is a significant source of CO, emissions. Morgan Stanley predicted in 2022 that in the coming two decades, India aims to achieve impressive economic growth, catapulting us to the rank of higher middle-income countries (Chateau et.al., 2023).

Having established that India, a major emerging economy, is also a significant emitter of greenhouse gases and, hence, plays a crucial role in the success of global climate efforts, it is helpful to evaluate the efforts of the country to mitigate the problem. Firstly, the country has actively participated in global climate negotiations and has demonstrated a commitment to international agreements such as the Kyoto Protocol, the Paris Agreement, and the Conference of Parties (COP) meetings.

India ratified the Kyoto Protocol in 2002, and as a developing nation, India was not obligated to reduce its greenhouse gas emissions under the protocol. However, it was encouraged to adopt sustainable development practices and benefit from mechanisms like the Clean Development Mechanism (CDM). a flexible mechanism for countries to achieve their emission reduction targets cost-effectively. Established under Article 12 of the Protocol, the CDM allows developed countries (Annex I countries) to invest in emission reduction projects in developing countries (non-Annex I countries) and earn certified emission reduction (CER) credits in return. These projects range from renewable energy installations and efficiency improvements to reforestation efforts and waste management systems. Despite criticisms for issues such as uneven geographical distribution of projects and questions about the emission reductions achieved, the CDM remains a significant tool in international climate policy, fostering cross-border cooperation and technology transfer. Interestingly, India became one of the largest beneficiaries of the CDM, significantly contributing to substantial growth in the renewable energy sector (Aaron et.al., 2009). By 2012, India had registered over 1,500 CDM projects, which were expected to reduce more than 600 million tonnes of CO2 equivalent (MoEFCCC & UNDP, 2023).

Since committing to the UNFCCC and the Kyoto Protocol, India has adopted a comprehensive framework of legal and institutional mechanisms to respond to environmental challenges.

Several domestic policies to enhance environmental sustainability were launched, such as the 2008 National Action Plan on Climate Change (NAPCC), which outlined eight national missions focused on solar energy, enhanced energy efficiency, sustainable agriculture, water conservation, and more. The National Solar Mission, part of the NAPCC, set ambitious targets for solar power capacity, resulting in a rapid expansion of solar installations. By 2024, India had achieved over 60 GW of installed

solar capacity, positioning itself as a global leader in renewable energy. The Perform, Achieve, and Trade (PAT) scheme, launched under the National Mission for Enhanced Energy Efficiency, aimed to improve energy efficiency in energy-intensive industries by incentivizing industries to reduce energy consumption and trade energy savings certificates. Despite all these efforts, it remains a fact that the transition to renewable energy has not been sufficient enough to offset India's coal consumption and resultant emissions. Moreover, the implementation of climate policies at the state and local levels often encountered hurdles (MoEFCC & UNDP, 2023)

The 21st Conference of Parties held in 2015 in Paris was a landmark meeting for several reasons, the most prominent being the adoption of the Paris Agreement, a historic accord resulting from extensive negotiations among 196 parties, including major emitters, to collectively address climate change. The Conference exposed the hazards of runaway climate change. The adoption of the Paris Agreement at COP21 was driven by the need for a more comprehensive, inclusive, and flexible framework that could effectively address the global nature of climate change and overcome the limitations of earlier agreements like the Kyoto Protocol. The significance of the Paris Agreement lies in its universal nature, flexible framework, and focus on transparency and global cooperation, marking a pivotal shift towards a more concerted and inclusive effort to address climate change.

Adhering to the Kyoto Protocol, India was a crucial player in adopting the Paris Agreement, and the Nationally Determined Contributions (NDCs) under the Agreement reflect its commitment to reducing the emissions intensity of its GDP by 33-35% by 2030 from 2005 levels. Interestingly, according to the Minister for Environment, Forest and Climate Change's national statement, India has reduced the emission intensity by 33% by 2019, a decade before the scheduled time. Additionally, India aimed to achieve 40% of its installed electric capacity from non-fossil fuel sources by 2030 and create an additional carbon sink of 2.5 to 3 billion tonnes of CO2 equivalent through afforestation (Mitra et.al., 2015). The government envisaged five strategic policies to advance these estimates: the Perform, Achieve, and Trade (PAT) scheme, Energy Conservation Building Code, accelerated switch to renewable power, clean environment tax, and dedicated low-carbon freight corridor (WRI, 2017). India co-founded the International Solar Alliance in 2015, bringing together over 120 countries to promote solar energy adoption and facilitate the transfer of technology and finance. According to the government of India, "ISA is an alliance of the sunshine countries to utilise solar energy efficiently." In the first assembly of the ISA, in 2018, the "One Sun, One World, One Grid (OSOWOG) project was introduced and was later launched in collaboration with the United Kingdom and the World Bank Group. The OSOWOG project proposes a common grid of solar power for supplying power to 140 countries (Kohli, 2024).

Further, India continued to comply with the international demands at 2021 COP26 in Glasgow and announced its ambitious target of achieving net-zero carbon emissions by 2070. This is one among the five climate action commitments government of India made under the 'nectar elements' or 'Panchamrit' principle. Another critical demand was for nations to reduce the carbon intensity of their economies. Increasing the share of renewable energy in the energy mix and phasing down unabated coal power was also a key focus at COP26. In addition to policy measures, India has initiated steps to empower local communities to increase forest cover and promote

sustainable agricultural practices. India's commitments at COP26 reflected a balance between its development needs and its responsibilities toward global climate action (Kohli, 2024).

India has also shown interest in associating with global collaborations to pursue climate action. It includes the Coalition for Disaster Resilient Infrastructure, Infrastructure for Resilient Island States, Big Cat Alliance etc. The G20 meeting at New Delhi early last year led to the launching of the Global Biofuel Alliance, aimed at facilitating a 'catalytic platform' for promoting biofuels (Yadav, 2023)

In December 2023, India participated in COP28 held in Dubai, subjecting ourselves to a review of our progress and campaign for a balance between its developmental needs and our commitments to climate justice. While India entered COP28 with a range of expectations and constructive proposals, there were also areas of disagreement and contention. The following paragraphs will discuss these aspects related to India and COP28.

India's Response to COP28 & COP29

A study conducted in 2017 by the World Research Institute India categorically states that the various strategies and policies adopted by the Government of India to manage CO2 emissions and climate change would deliver moderate yet significant development benefits, including improvement in air quality, catalyse new industries, generating new jobs and thereby increase average household income by 3 percent by 2030, while not adversely affecting economic growth (WRI, 2017).

Notably, considerable progress has been made in reducing greenhouse gas (GHG) emissions by decreasing the emission intensity of its GDP by approximately 24% between 2005 and 2020. This reduction reflects India's efforts to improve energy efficiency and shift towards cleaner energy sources. The renewable energy sector has witnessed significant growth, with installed solar power capacity increasing from 2.6 GW in 2014 to over 40 GW by 2021 and 170 GW by March 2023, making India a leader in solar energy deployment. Wind power capacity has also grown to around 39 GW, significantly contributing to the renewable energy mix. Efforts to expand hydropower and biomass energy to 40 percent by 2030 further diversify the renewable energy portfolio. Programs like the Perform, Achieve, and Trade (PAT) scheme have promoted energy efficiency in industrial sectors, leading to substantial energy savings and emissions reductions. The Standards and Labeling Program by the Bureau of Energy Efficiency (BEE) has also helped reduce energy consumption in household appliances. Additional tree cover will be created by 2030 to augment the efforts to generate a carbon sink of 3 billion tonnes of CO_2. States have also been advised to redraft their action plans on climate change (SAPCCs) to fit in the requirements of the national goals set by the new Intended Nationally Determined Contribution (Chateau et.al., 2023).

The COP28 offered India a platform to assert its leadership in global climate action, advocate for its priorities, and contribute significantly to the international climate agenda. One of the critical expectations was for India to present an updated Nationally Determined Contribution (NDC), underscoring its commitment to sustainable development and climate action. India's focus at the conference spanned several critical areas, including the contentious topic of climate finance (MoEFCC, 2023).

Firstly, the country has made significant strides in expanding its renewable energy capacity, particularly solar and wind power. COP28 was seen as an opportunity for India to showcase these achievements and to seek international cooperation and investment to accelerate further the transition to clean energy. This focus on renewables aligns with India's broader goals of reducing carbon emissions and fostering sustainable development.

Secondly, India emphasized the importance of climate finance and technology transfer. As a developing nation with ambitious climate targets, India advocated for enhanced financial support and access to affordable, efficient technologies. This support is crucial for India to implement its mitigation and adaptation strategies effectively, ensuring that the country can meet its climate goals while continuing to develop economically. Moreover, the Prime Minister raised concerns over the progress made by the new collective quantified goal on climate finance and called upon the developed countries to eliminate their carbon footprint before 2050 (MoEFCC, 2023).

Adaptation strategies also featured prominently in India's agenda at COP28. Given its diverse geography and various climate vulnerabilities, India stressed the need for robust adaptation measures. This includes strengthening infrastructure, improving water management systems, and enhancing the resilience of agriculture to cope with the changing climate. By focusing on adaptation, India aimed to safeguard its population and economy from the adverse impacts of climate change. India co-launched the Phase II of the LeadIT 2.0 (Leadership Group for Industry Transition) along with Sweden to bring together governments, industries, researchers and think tanks to adopt inclusive and just industry transition (MoEFCC, 2023).

Lastly, India continued to champion the principles of equity and common but differentiated responsibilities. At COP28, India emphasized the importance of a fair transition that considers different countries' developmental needs and historical emissions. This stance underscores India's call for equitable global climate policies that account for nations' varying capacities and responsibilities in addressing climate change. The India Pavilion hosted a side event on "Localising Climate Action" under the Climate Ambition Quad Climate Working Group (QCWG) to discuss the and recognise the role of local communities in supporting sustainable lifestyles (MoEFCC & UNDP, 2023).

A distinguishing effort by the government of India has been the Mangrove Alliance proposed at COP28, as an extension of the Mangrove Initiative for Shoreline Habitats and Tangible Incomes (MISHTI), a unique and effective afforestation programme to prevent coastal erosion and climate disasters intended to benefit a large coastal population of the world. The initiative is a testimony of the country's commitment to fostering holistic conservation efforts and sustainable lifestyles. India is sincerely trying to address climate change, but our targets for solar power capacity are pretty ambitious. While the global solar power capacity was only 181 GW, India aimed to reach 175 GW by 2022. Now, the new goal is to achieve 200 GW by 2030. The statistics thus far are promising, and most of the targets are being covered ahead of time, including reducing emission intensity, non-fossil fuel electric installed capacity (MoEFCC, 2023).

One intriguing development during COP28 was India's refraining from signing the Declaration on Climate and Health. COP28 brought up Health Day as a pathbreaking

initiative, and, interestingly, India abstained from the ministerial while extending support to it. As already discussed, the Declaration aims to accelerate concerted efforts by countries to reduce carbon emissions, and India expressed reservations about adopting measures to calculate the carbon footprint of health systems and to cut down the use of greenhouse gases for cooling purposes in healthcare infrastructure. The other steps include implementing sustainable procurement standards for national health systems and supply chains. The complex challenges in the healthcare sector and ever-increasing demands are making India skeptical about moving in this direction, while elsewhere at G20, we have been keen to champion health priorities (PTI, 2023a).

Similarly, India held back from signing the first-ever UAE Declaration on Sustainable Agriculture, Resilient Food Systems, and Climate Action. In a statement, Mariam Almheiri, the UAE Climate Change Minister, said that the Declaration proposes to integrate agriculture and food systems with NDCs to protect the lives and livelihoods of farmers living on the frontline of climate change. 159 countries have signed the Declaration, and over 200 organisations have agreed on the call to action for the same purpose. Yet again, India has held back from signing the same. India is worried that committing to reduce emissions in the agricultural sector, which requires changing farming methods, would adversely affect food security (Kumar, 2023).

The COP28 ended with a pledge by governments and businesses to honestly work towards the "beginning of the end" of fossil fuels to attain net-zero emissions (UNFCCC, 2023). For India, as long as the primary goal continues to be rapid expansion of the economy, this pledge and the declarations are challenging to fulfill. This disposition has always attracted apprehension from other countries since we are a major emitter of greenhouse gases due to being the country with the largest population. The counterargument that India has been stating is that it is a fact that India's cumulative historical emissions are lower than those of the prominent industrialized countries. The per capita emissions are the lowest among G20 countries.

At COP29 India continued to raise reservations about the inadequacy of the USD 300 bn climate finance deal for appeasing the climate-vulnerable developing countries. India opposed the deal after its adoption calling it 'optical illusion'. India persists to point out the imbalances in the assessment of mitigation by the Global North and the Global South, revealing the historically incomparable inequalities in per capita carbon emission among them (The Hindu, 2024). While voicing the shortfalls of the developed countries to own up to their climate responsibilities vis-à-vis climate finance and mitigation targets, India did not refrain from mobilising the Global South through side events to share experiences, reaffirming climate commitments. The important side events were- Integrating Disaster Resilient Infrastructure into the Adaptation Strategies forging new paths for sustainable development, LeadIT Member Meet with global corporates, India-Sweden Industry Transition Partnership, Unlocking climate investments for Small Island Developing States including the Indian Ocean islands under Security and Growth for All in the Region (SAGAR) initiative and Pacific Ocean islands under the Forum for India-Pacific Islands Cooperation (FIPIC) initiative, Energy Transitions for the Global South, Solarising Communities through Women-led Climate Action (MoEFCC, 2024).

India's Progress & Future Prospects in Climate Solutions

India, the world's third-largest emitter of greenhouse gases (GHGs), has made significant strides in addressing climate change through efforts to cut greenhouse gas emissions and transition to renewable energy. As a rapidly developing nation, India faces the dual challenge of meeting its growing energy demands while mitigating its environmental impact. All initiatives to tackle climate change are drafted with the State's primary responsibilities in focus, namely, meeting the requirements of health care and education and, more importantly, poverty eradication and food security (Lahiry, 2017).

Six months past the COP28, one cannot be complacent about the progress made by the country. Despite many promising initiatives and achievements, India faces significant challenges in further reducing GHG emissions. The country's rapid economic growth and industrialization create pressures to balance development and environmental sustainability, often resulting in continued reliance on coal and other fossil fuels for affordable and reliable energy. Further complicating the situation, the complex geopolitical challenges posed by the pandemic have severely hampered supply chains, caused energy shortages, and forced the country to take a step back in its commitments under the Paris Agreement (CII, 2023).

Unsurprisingly, even by 2035, the share of renewable energy in total fuel usage in the country might rise to only 8 percent. The targeted carbon sink of 3 billion tonnes of CO2 calls for an increased carbon sequestration of 14 percent during this period. The aim has been to optimise the resources to accelerate mitigation and adaptation (Lahiry, 2017). This transition to renewable energy requires substantial investments in infrastructure, such as grid modernization and energy storage solutions, which are constrained by financial limitations and limited access to technology. About US $206 Bn or more was estimated as additional costs to achieve these targets. Moreover, implementing climate policies and transitioning to renewable energy involves complex social and political considerations, including issues related to land acquisition for renewable energy projects and the socio-economic impacts on communities dependent on fossil fuel industries. Setting up the Climate Technology Centre and Network (CTCN) is a promising proposal.

Attaining the 200 GW of renewable energy target set for 2030 alongside an annual GDP growth of 6 to 7 percent remains impossible until we rope in the resources of the private sector. It is reassuring that the private sector has contributed significantly to the country's climate finance. Also, according to the study by the World Economic Forum, India's corporate leaders understand the relevance of sustainability. By 2020, it amounted to US $22 Bn and was used to finance mitigation initiatives. Now, there is a need to attract investments that foster adaptation efforts.

In 2023, India rose to seventh position in the Climate Change Performance Index (CCPI), a promising leap from the 31st in 2014. A lot of calculated efforts have gone into achieving this status. Our governmental agencies understand the relevance of environmentally sustainable growth in achieving better life standards for the people. The National Climate Agenda has set an ambitious target of reducing carbon emissions and is proactively striving towards the same. The Startup India Scheme and the Digital Agriculture Mission are examples of some government measures to foster environmentally friendly and sustainable technologies. Another promising attempt has been made, the 'Green Indian Railways,' to transition to solar-powered trains

gradually, the first one launched in 2017 (Shah, 2024).

Kibria (2024) points out the findings of the 2023 State of Climate Action report published by the Systems Change Lab, which provides an alarming account of how severely countries have failed to limit global warming to 1.5 degrees Celsius. The solution they put forth was enhanced integration of the private sector. The land use and agriculture sectors are the most demanding in terms of funding to switch to energy-efficient climate adaptation patterns.

Despite this growing understanding of the need to engage in more robust climate action and various commendable attempts by corporates, the private sector is largely disconnected from the urgency of prioritising long-term societal/environmental benefits. Most industries have yet to fathom how to participate in the process. Another misconception that needs to be addressed immediately is that investment in climate action initiatives is less rewarding, which is, in fact, contrary to many studies that highlight the possibilities of the adaptation market. The government has yet to draft attractive regulatory, legal, and fiscal frameworks to recompense their investments, including tax breaks and subsidies. Also, sharing accurate climate data and future projections could help stimulate their attention (Kibria, 2024).

There have been some concerted efforts to better the situation. A welcome initiative has been the signing of the 'Declaration of the Private Sector on Climate Change' on 5th November 2020, by the Ministry of Environment, Forest and Climate Change and 24 prominent businesses. It is a significant step of commitment from the private sector adding to the country's success in achieving the 2 degrees compliance. According to Prakash Javadekar, Minister of Environment, Forest and Climate Change, the corporates have adopted 'various clean processes and initiatives' creating 'low-carbon sustainable economies' to catch up with the government's climate obligations (Javadekar, 2020). The Mahindra Group made public commitments to net zero energy productivity and has developed a green business portfolio spanning its electric vehicles, logistics, and hospitality sectors. The Production Linked Incentives (PLI) scheme of the Government of India attracted $8 Bn in investment and motivated the private sector to pledge over $200 bn to support India's energy roadmap (Shah, 2024).

Since India's ascendency to the role of Presidency of G20 in 2023, climate change issues have gained prominence in discussions concerning the stability of the global economy. The aim was to promote collaborations towards accelerating decarbonisation efforts, especially in the areas of blue economy, green hydrogen, land degradation, circular economy principles, and resource efficiency (CII, 2023). One chapter of the G20 New Delhi Leaders' Declaration is titled the Green Development Pact for a Sustainable Future, which enumerates ways to implement energy transitions, conserve and restore ecosystems, harness ocean-based economy, end plastic pollution, and reduce disaster risks while mainstreaming lifestyles for sustainable development (G20, 2023).

At COP28, India made an unexpected move and declined to sign the pledge to triple the installed renewable energy capacity by 2030. While India agreed to the idea of increasing renewable energy by three times by 2030, along with China, Japan, Canada and a few other countries, refrained from signing the pledge. Interestingly, India has been at the forefront of adopting measures to scale up the transition to renewable energy and has endorsed the commitment in all relevant forums in the

recent past, including G20. But, unlike the 118 countries that signed the pledge, we have been silent on the aspect of accelerating the phase-down of fossil fuels, especially coal. Reasons for this back-down could be the concerns about seeking additional financial support from the Global North for building its renewable energy capacity to compensate the transformative impact on various sectors (Koshy, 2023; PTI, 2023). There were other reservations, too, such as we were unwilling to agree with the new postulation that large dams are not renewable energy sources.

As climate security is gaining prominence in the country's policy-making, India is increasingly conscious of balancing climate actions with domestic developmental priorities and geopolitical pressures. There is a dearth of research and institutionalised discourses that assess and establish the actual vulnerabilities of the interlinkage between climate change and security in the Global South. This void has stalled the government from adopting adequate measures to handle domestic as well as international pressures of sustainability and economic growth. It is argued that the demand by the global North to 'securitise' climate change, and to associate mitigation commitments with climate security, would further turn detrimental to the diplomatic and economic interests of developing countries like India that continue to rely on fossil fuels for developmental projects (Jayaram, 2024).

With regard to COP29, a major step by India has been the setting up of the Bureau of Energy Efficiency (BEE) to frame the Indian Carbon Market (ICM). Equally significant have been the actions taken in favour of decarbonisation of the economy. Projects like the first-ever multi-purpose green hydrogen plant under the National Green Hydrogen Mission, the National Solar Rooftop Policy, special focus given to popularise zero-emission vehicles etc as well as added emphasis on accelerating India's involvement in various international initiatives such as the International Solar Alliance are proof of the country's interest in pursuing climate action. India is expected to continue to voice the demand of the Global South for raising climate finance to USD 1 trillion per year, as well as conclude the negotiations for GGA by COP30 in Belem (Jha & Kwatra, 2024).

Conclusion

The world is at a very precarious juncture where nature and its resources determine more than 50% of global GDP, and the alarming rate of degradation of biodiversity is posing an unfathomable threat to people, especially those of vulnerable developing countries. In the last decade the planet has experienced the highest temperatures, making survival difficult for millions. Since 1992, global leaders have been on a path to overcoming climate change through concerted efforts, reviewing and revising their commitments every year at COP meetings, adopting pledges and declarations, and inviting the support of the corporate sector and civil society. By 2030, the Paris Agreement envisages countries to reduce their emissions intensity of GDP by 35 percent, achieve 40 percent renewable energy capacity, and create sufficient new forest cover to generate an additional carbon sink equivalent to 3 bn tonnes of $CO_{2.}$

India has so far been steadfast in its climate actions, committed to a clean and sustainable transition. Looking ahead, India aims to increase its renewable energy capacity to 450 GW by 2030, an ambitious target requiring the accelerated deployment of solar, wind, and other renewable energy sources. Strengthening policy

and regulatory frameworks will support this expansion, including streamlining project approvals, providing financial incentives, and implementing robust monitoring mechanisms. Promoting technological innovation in energy storage, smart grids, and carbon capture and storage (CCS) will enhance India's capacity to reduce emissions. Expanding international cooperation can facilitate technology transfer, access to climate finance, and the sharing of best practices.

Having said that, one cannot ignore the fact that addressing the socio-economic impacts of the energy transition is essential. This includes supporting communities affected by the shift from fossil fuels to renewable energy, retraining workers, creating green jobs, and investing in social infrastructure to ensure a just transition. India, like a few other countries, has had strong reservations about the keenness of the world leaders in dealing with this aspect with due diligence. India has been pioneering the concerns of the Global South in voicing the anomalies in accelerated coal phase-out vis-à-vis anxieties over the much-needed economic growth, the lethargy of a majority of the countries in working towards feasible climate actions, issues of shortfalls in equity between the Global North and South in transition and mitigation actions, including sufficient technological and financial support.

References

Aaron, A., Axberg, G.N., Goel, N., Kumar, A., Lazarus, M., Ostwald, M., Polycarp, C., Tollefsen, P., Torvanger, A., Upadhyaya, P., & Zetterberg, L. (2009, October). Reducing Greenhouse Gas Emissions in India: Financial Mechanisms and Opportunities for EU-India Collaboration. Stockholm Environment Institute, Project Report-2009. https://mediamanager.sei.org/documents/Publications/Climate-mitigation-adaptation/reducinggreenhousegasemissions-india.pdf

BW Online Bureau. (2024, November 27). Aftermath COP-29: What Should India's Agenda Be? *Business World. https://www.businessworld.in/article/aftermath-cop-29-what-should-indias-agenda-be-540506#goog_rewarded*

Chateau, J., Dang, G., MacDonald, M., Spray, J., & Thube, S. (2023, October). *A Framework for Climate Change Mitigation in India* [Working Paper]. International Monetary Fund. https://www.imf.org/-/media/Files/Publications/WP/2023/English/wpiea2023218-print-pdf.ashx

CII. (2023, December 15). *Sustainability- Priority for COP28: Indian Industry Perspective*. https://ciiblog.in/priorities-for-cop-28-indian-industry-perspective/

COP28-UAE. (2023). *What is COP28 & Why is it important?* https://www.cop28.com/en/what-is-cop

Diab, K. (2024, November 2023). COP29: Complex Article 6 rules pave way to unruly carbon markets. *Carbon Market Watch. https://carbonmarketwatch.org/2024/11/23/cop29-complex-article-6-rules-pave-way-to-unruly-carbon-markets/*

Falduto, C., Noels, J., & Jachnik, R. (2024). The New Collective Quantified Goal on climate finance: Options for reflecting the role of different sources, actors, and qualitative considerations. *OECD/IEA Climate Change Expert Group Papers No. 2024/02. OECD Publishing, Paris.* https://doi.org/10.1787/7b28309b-en.

G20. (2023, September 9-10). *G20 New Delhi Leaders' Declaration*. https://www.mea.gov.in/Images/CPV/G20-New-Delhi-Leaders-Declaration.pdf

Jayaram, D. (2024, January 31). Shifting discourses of climate security in India: Domestic and international dimensions. *Third World Quarterly, 45*(14), 2108-2126. https://doi.org/10.1080/01436597.2024.2314003

Jha, V. & Kwatra, S. (2024, November 11). India's Road to and from the Baku Climate Talks. *NRDC*. https://www.nrdc.org/bio/vyoma-jha/indias-road-and-baku-climate-talks

Javadekar, P. (2020, November 5). *Declaration of the private sector on Climate Change a historic step* [Press Release]. Ministry of Environment, Forest and Climate Change. https://pib.gov.in/Pressreleaseshare.aspx?PRID=1670351

Kalia, S. (2023, December 3). What can we expect from health talks at COP28?- Explained. *The Hindu. https://www.thehindu.com/sci-tech/energy-and-environment/what-can-we-we-expect-from-health-talks-at-cop28-explained/article67524052.ece*

Kibria, S. (2024, January 31). *The role of the private sector in climate-resilient food systems*. UNDP. https://www.undp.org/blog/role-private-sector-climate-resilient-food-systems

Kohli, R. (2024). India on the Forefront of Mitigating Climate Change. *DPIIT Startupindia*. https://www.startupindia.gov.in/content/sih/en/bloglist/blogs/Climate-change.html#:~:text=India%20will%20achieve%20a%20target,by%20the%20end%20of%202030.

Koshy, J. (2023, December 3). COP28 Climate Meet: India not among 118 nations that pledged to triple green energy. *The Hindu*. https://www.thehindu.com/sci-tech/energy-and-environment/cop28-climate-meet-india-not-among-118-nations-that-pledged-to-push-green-energy/article67598918.ece

Kumar, R. (2023, December 8). Explained: Why India refused to sign declaration to reduce agri emissions at COP28. *The News Minute*. https://www.thenewsminute.com/news/explained-why-india-refused-to-sign-declaration-to-reduce-agri-emissions-at-cop28

Lahiry, S. (2017, February 7). Paris Agreement and India's Climate Change Challenges. *Down to Earth*. https://www.downtoearth.org.in/climate-change/paris-agreement-and-india-s-climate-change-challenges-57000

Maizland, L. (2023, December 5). Global Climate Agreements: Successes and Failures. *Council on Foreign Relations*. https://www.cfr.org/backgrounder/paris-global-climate-change-agreements

Mitra, A., Damassa, T., Fransen, T., Stolle, F., & Mogelgaard, K. (2015, October 2). 5 Key Takeaways from India's New Climate Plan (INDC). *World Resources Institute*. https://www.wri.org/insights/5-key-takeaways-indias-new-climate-plan-indc

MoEFCC. (2023, December 12). *India at COP-28: Highlights of 28th Conference of Parties* [Press Release]. Ministry of Environment, Forest and Climate Change. https://static.pib.gov.in/WriteReadData/specificdocs/documents/2023/dec/doc20231212285701.pdf

MoEFCC. (2024, November 23). *India's participation in various Side-events during CoP29 UN Climate Change Conference at Baku, Azerbaijan* [Press Release]. https://pib.gov.in/PressReleaseIframePage.aspx?PRID=2076458

MoEFCC & UNDP. (2023). *From Paris to Dubai, India's Climate Action Journey- Resolve to Result*. *UNDP*-India Publications. https://www.undp.org/india/publications/paris-dubai-indias-climate-action-journey-resolve-result

PTI. (2023, December 2). COP28: India, China refrain from signing pledge to triple world's renewable energy capacity by 2030. *The Economic Times*. https://economictimes.indiatimes.com/industry/renewables/cop28-india-china-refrain-from-signing-pledge-to-triple-worlds-renewable-energy-capacity-by-2030/articleshow/105684216.cms?from=mdr

PTI. (2023a, December 3). India refrains from signing COP28 Health and Climate Declaration. *India Today*. https://www.indiatoday.in/environment/story/india-refrains-from-signing-cop28-health-and-climate-declaration-greenhouse-reduction-hinder-growth-2471542-2023-12-03

Shah, A. (2024, January 12). *India's public-private partnerships for climate are a global model to follow*. World Economic Forum. https://www.weforum.org/agenda/2024/01/india-public-private-partnerships-climate/#:~:text=The%20private%20sector%2C%20for%20its,renewable%20energy%20and%20battery%20production.

The Hindu. (2024, November 24). *India opposes COP29 finance deal after it is adopted, terms it 'optical illusion'*. https://www.thehindu.com/sci-tech/energy-and-environment/developed-nations-offer-300-billion-annually-after-10-years-to-global-south/article68903747.ece

United Nations. (2022, December 11). *Marking the Kyoto Protocol's 25th anniversary*. https://www.un.org/en/climatechange/marking-kyoto-protocol%E2%80%99s-25th-anniversary

UNFCCC. (2023, December 13). *COP28 Agreement Signals "Beginning of the End" of the Fossil Fuel Era*. https://unfccc.int/cop28

UNFCCC. (2024, January 12). *COP28: What Was Achieved and What Happens Next?* https://unfccc.int/cop28/5-key-takeaways

UNFCCC. (2024a, November). *The Enhanced Lima Work Programme on Gender*. https://unfccc.int/topics/gender/workstreams/the-enhanced-lima-work-programme-on-gender

UNFCCC. (2024b, November 21). *COP29 Adopts Baku Workplan to Evaluate Voices of Indigenous Peoples and Local Communities in Climate Action*. https://unfccc.int/news/cop29-adopts-baku-workplan-to-elevate-voices-of-indigenous-peoples-and-local-communities-in-climate

UNFCCC. (2024c, November 22). *COP29 Celebrated First Biennial Transparency Reports as Vital Enablers of Climate Action*. *https://unfccc.int/news/cop29-celebrates-first-biennial-transparency-reports-as-vital-enablers-of-climate-action*

UNFCCC. (2024d, November 24). *COP29 UN Climate Conference Agrees to Triple Finance to Developing Countries, Protecting Lives and Livelihoods*. https://unfccc.int/news/cop29-un-climate-conference-agrees-to-triple-finance-to-developing-countries-protecting-lives-and

UNFCCC. (n.d.). *What is the Kyoto Protocol?* Retrieved June 24, 2024, from https://unfccc.int/kyoto_protocol

UNFCCC. (n.d.). *What is the Paris Agreement?* Retrieved June 24, 2024, from https://unfccc.int/process-and-meetings/the-paris-agreement

UNFCCC. (n.d.). *COP28: What was Achieved and What Happens Next?*

WEF. (2024, January). *The Global Risks Report 19th Edition- Insight Report*. World Economic Forum, Marsh McLennan & Zurich Insurance Group. https://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2024.pdf

WRI. (2017, December 19). India Can Achieve its Climate Goals While Maintaining Strong Economic Growth [Press Release]. *World Resources Institute*. https://www.wri.org/news/release-india-can-achieve-its-climate-goals-while-maintaining-strong-economic-growth

Wyns, A. (2024, January 15). 5 breakthroughs o climate and health at COP28- and what comes next. *ClimaHealth- World Health Organisation & World Meteorological Organisation*. https://climahealth.info/5-breakthroughs-on-climate-and-health-at-cop28-and-what-comes-next/#:~:text=The%20COP28%20Declaration%20on%20Climate%20and%20Health%20represents%20a%20shared,to%20be%20climate%2Dready%20and

Yadav, B. (2023, December 9). *COP28 National Statement by Union Minister for Environment, Forest and Climate Change* [Press Release]. Ministry of Environment, Forest and Climate Change. *https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1984434*