Paris Agreement: India's Progress on the way to its Climate Pledge

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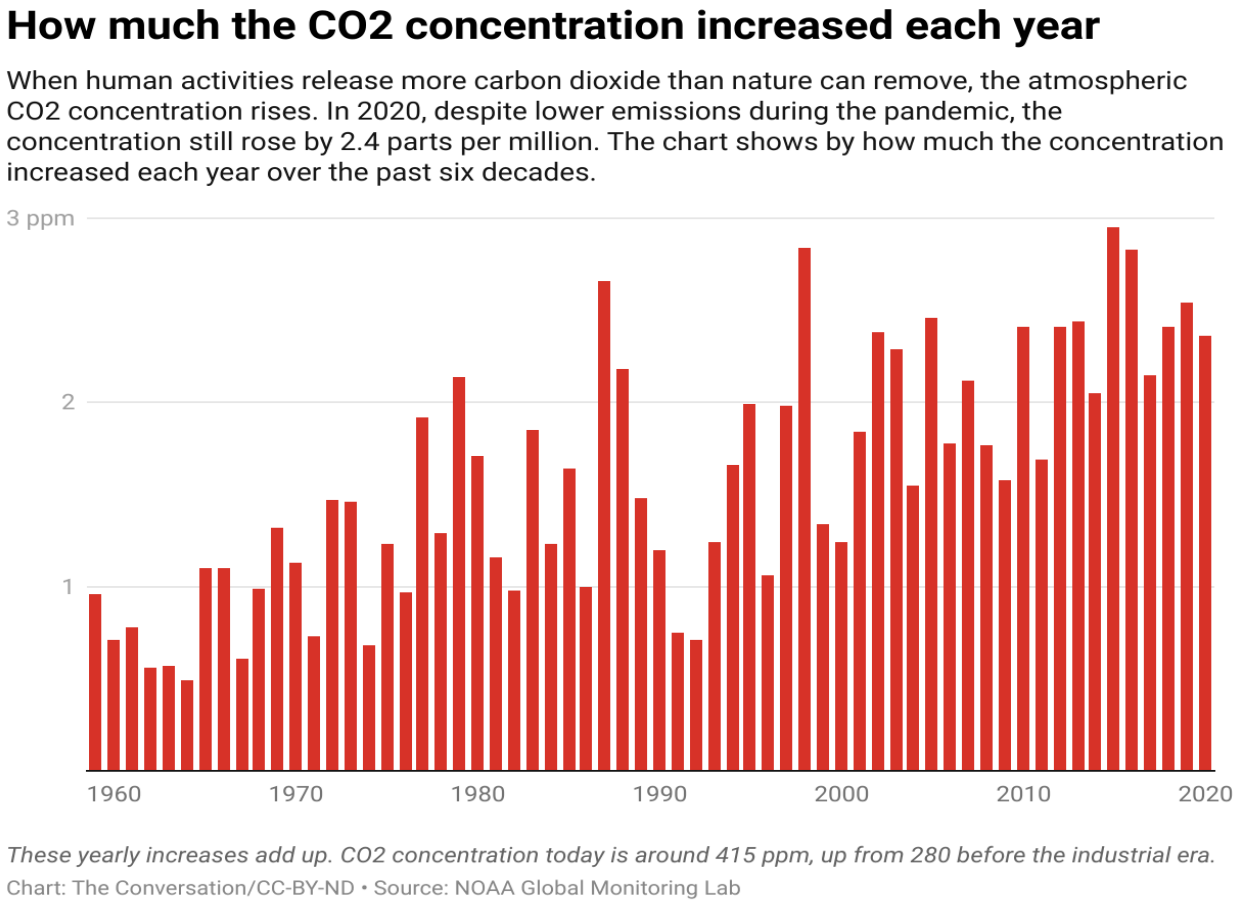
Introduction

The United Nations Framework Convention on Climate Change (UNFCCC) defines "climate change" as a change in climate that modifies the composition of the global atmosphere and is related directly or indirectly to human activity. In addition to natural climate variability, it is observed over comparable time spans.

The rise in average global temperature, ice cap melting, variations in precipitation, and an increase in ocean temperature leading to sea level rise are all key elements of climate change. The average temperature of the Earth has already risen by 0.76°C compared to the 1961-1990 average, according to the World Meteorological Organisation's (WMO) Statement on 'the situation of the climate in 2015.' This confirmation of rising temperatures serves as a wake-up call for everyone to abandon prejudices or skepticisms regarding climate change's scientific truths. In order to alleviate the negative effects of climate change and adapt to the changing reality, it is necessary to internalise the human value of cooperation.



Source: DownToEarth

India is a signatory to the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol, which represent international agreement on how to address climate change. On October 2, 2016, India signed the Paris Agreement, a major agreement that calls on countries to address climate change and keep global warming far below 2 degrees Celsius.

Paris Agreement, 2015: The Paris Agreement, often known as the Paris Accords or the Paris Climate Accords, is an international climate change accord that was signed in 2015. At a ceremony in New York on April 22, 2016 (Earth Day), the Paris Agreement was opened for signature.

The Paris Agreement is a legally binding international convention on climate change that was adopted by 196 countries on December 12, 2015, during the 21st Conference of Parties in Paris, and went into effect on November 4, 2016. The goal of the Paris Agreement is to keep global warming far below 2 degrees Celsius, preferably 1.5 degrees Celsius, compared to pre-industrial levels.

During the 21st session of the Conference of the Parties (COP21) of the United Nations Framework Convention on Climate Change in 2015, 196 countries joined together to approve the Paris Agreement (UNFCCC). The Paris Agreement intends to keep global warming well below 2°C and make best efforts to keep it below 1.5°C. Countries submitted Nationally Determined Contributions (NDCs) as part of the Paris Agreement, stating intentions to reduce emissions in order to meet the global temperature objective.

Objective and Purpose of this Study

This research examines to what extent the Paris Agreement could serve as a future roadmap for dealing with climate change, India’s progress towards its climate pledge and what are the economic implications of the same. With the use of NRDC data, we will first look at India's INDC Targets. Second, we look at the existing framework of law and policy for climate change in India. Finally, we consider how India has progressed towards its goals under the Paris Agreement.

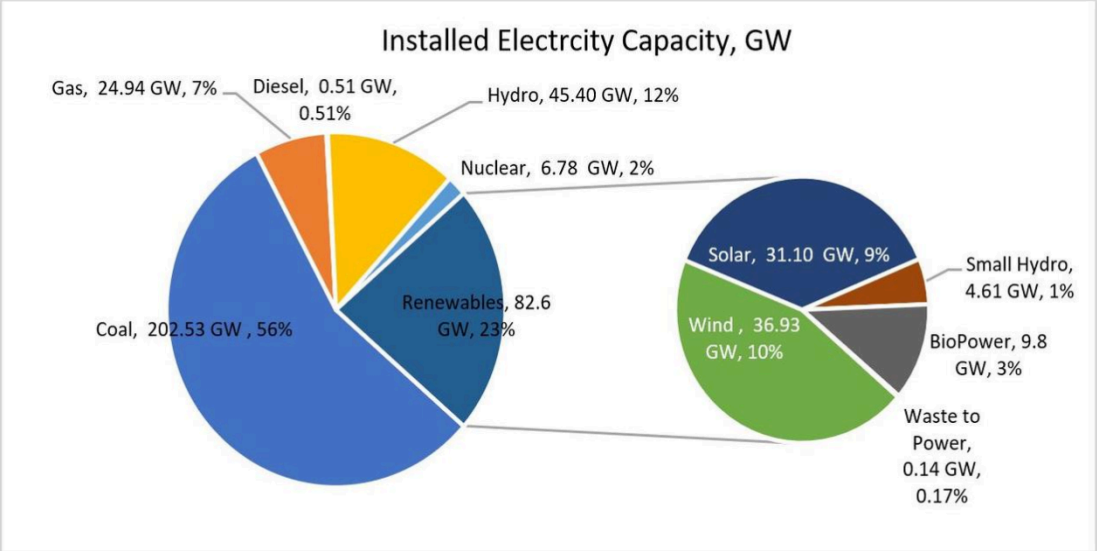
Data and Interpretation

India is the world’s third-largest greenhouse gas (GHG) emitter and second most populous country. India, despite having no binding mitigation obligations as per the Convention, declared a voluntary goal of reducing the emission intensity of its GDP by 20-25% over 2005 levels, by 2020. In 2015, 196 nations came together to approve the Paris Agreement during the 21st session of the Conference of the Parties (COP21) of the United Nations Framework Convention on Climate Change (UNFCCC). Countries as part of the Paris Agreement submitted Nationally Determined Contributions (NDCs) detailing plans to cut emissions to meet the global temperature goal. India’s first NDC has three main elements (Government of India, 2015)

- An economy-wide emissions intensity target of 33%–35% below 2005 levels;
- A electric power capacity target of 40% installed capacity from non-fossil-based energy resources by 2030, to be achieve with internationally support); and
- A carbon sink expansion target of creating an additional (cumulative) carbon sink of 2.5–3 GtCO2e through additional forest and tree cover by 2030.

India's National Action Plan on Climate Change (NAPCC) intends to steer the country toward a low-carbon future. Solar, energy efficiency, sustainable habitat, water, ecosystems, forest cover, sustainable agriculture, and climate research are among the plan's eight aims. This national strategy establishes the groundwork for India to meet its Paris Agreement goals while also balancing other national priorities.

India's installed capacity of non-fossil energy for electricity generation — solar, wind, hydel, and nuclear — was 134 GW in 2019 and will be 522 GW by 2030, according to the Central Electricity Authority (CEA). This will necessitate increasing solar energy installed capacity to 280 GW and wind energy installed capacity to 140 GW. In 2030, total installed capacity will be 817 GW, and power generation will be 2,518 billion units, according to this projection.



Source: https://www.nrdc.org/experts/anjali-jaiswal/transitioning-indias-economy-clean-energy

The Environment (Protection) Act of 1986 is the country's comprehensive legislation on environmental protection and enhancement. The Air (Prevention and Control of Pollution) Act of 1981, in addition to this law, addresses the prevention, control, and abatement of air pollution. The Energy Conservation Act of 2001, which is aimed at mitigating and adapting to climate change, puts forth a defined road map for efficient energy use and energy conservation. Furthermore, the National Environment Policy of 2006 encourages sustainable development options, and the National Action Plan on Climate Change (NAPCC) of 2008, as well as several

state action plans on climate change, are all designed to help reduce greenhouse gas emissions. Similarly, the government has carved out numerous strategies and projects in the transportation sector for the greater objective of climate change mitigation and adaptation. Over the course of 30 years, the initiative on dedicated freight lines is expected to save 457 million tonnes of CO2.

These schemes and plans are far from complete. In reality, they are the major government projects that demonstrate the importance that India places on environmental concerns and long-term growth.

India's long-term objective is to install 450 GW of renewable energy by 2030, while the National Solar Mission seeks to install 100 GW of solar energy by 2022. 30 While these objectives are lofty, India's solar energy potential is enormous, with a capacity of 750 GW. By 2022, India plans to install 60 GW of wind energy, with 55 GW onshore and 5 GW offshore. With almost 38 GW of installed capacity as of July 2020, India is the world's fourth-largest wind energy market.

India's goal of 175 GW of renewable energy by 2022 could employ over 300,000 people and provide 1 million additional job opportunities. Despite its fast rise in recent years, COVID-19 is posing a threat to the solar industry. Safeguard duties on solar modules, manufacturing, land availability, and other issues are all causing problems for the solar business.

The need for housing, appliances, and industries is increasing as the world's population grows. Over 70% of India's annual energy use is accounted for by buildings and industries. Energy efficiency will be crucial in India's rising economy to save energy, increase energy availability, and combat pollution. In India, residential and commercial buildings account for roughly 30% of overall electricity usage, with that percentage anticipated to rise to 48% by 2042.

In terms of energy-efficient appliances, India has made great progress. India was the first government in South Asia to unveil The India Cooling Action Plan (ICAP) in 2019, a comprehensive plan that prioritises effective, climate-friendly, and economical cooling for everybody. 85 The largest inverter air conditioning market in India has been aggressive in its attempts to reduce the amount of hydrofluorocarbons (HFCs) used in air conditioning units, leapfrogging to the more environmentally friendly R32 coolant. The ICAP also includes cool roofs, energy-efficient buildings, and cold-chain enhancements, all of which aim to reduce cooling demand.

As part of its Auto Fuel Policy, India established BS VI vehicle and fuel emission regulations. In comparison to the BS IV emission regulations, the BS VI emission requirements will result in a 40% reduction in PM emissions and a 43% reduction in NOx emissions. Additionally, in 2020, light-duty vehicles will be subject to Corporate Average Fuel Efficiency (CAFE) regulations, which aim to improve the efficiency of internal combustion engine (ICE) cars. Phase I criteria for

heavy-duty vehicles went into effect in 2018, while phase II standards will go into force in April 2021.

India increased its investment in electric mobility with FAME-II, which will provide both demand and supply incentives to promote electrification and market penetration of electric vehicles. With only 246,000 electric vehicles (EV) sold in 2020 (less than 1%), India ramped up its investment in electric mobility. India is aiming to electrify its rail network, and Indian Railways declared in July 2020 that it will aim to be carbon-neutral by 2030.

Suggestions

According to a ResearchGate article, the following recommendations will aid in the efficient implementation of various government policies and schemes aimed at climate change mitigation and adaptation, allowing India to emerge as a global leader on climate change issues among developing countries.

a) Adequate environmental and climate change education must be provided at all levels of educational institutions (primary, secondary, graduate, and postgraduate). The youth of the country must be active in addressing climate change challenges since they will be the future climate leaders.

b) India's rich traditional knowledge and practises on climate change adaptation and mitigation should be documented, disseminated, and implemented throughout the country. The release of 'Parampara: A Book on India's Climate Friendly and Resilient Practices,' which was released by India's Prime Minister at the COP 21st session in Paris last year, is an important move in this regard. Such actions must be taken as soon as possible in order to revitalise the traditional way of life among the people of the country.

c) Bilateral climate agreements and understandings with various countries should be pursued by national governments under the broad framework of the Paris Convention in order to ensure climate resilient and green technology transfers as well as access to renewable energy sources in various parts of the world. Simultaneously, the government must devote financial resources to scientific research in order to produce indigenous green technology that may be shared or transferred to least developed countries, allowing them to become self-sufficient.

d) A dedicated law to combat climate change, in addition to policies and programmes, will undoubtedly strengthen India's efforts in contributing to climate change mitigation. If a separate legislation cannot be passed swiftly, a notification or rules under the Environment (Protection) Act can be issued to govern various activities that have a negative impact on the climate.

Conclusions

Currently, India is contributing only 6.8% of global emissions and its per capita emissions are only 1.9 tonnes (per capita). India's nationally determined contribution (NDCs) under the Paris Agreement is 2 degree compliant. The country is also likely to meet and possibly overachieve its NDCs under the Paris Agreement, the emissions gap report 2020 noted. The Climate Change Performance Index (CCPI) measures the emissions, renewable energy share and climate policies of 57 countries and the European Union. India, for the first time, ranks among the top 10 in this year's Climate Change Performance Index (CCPI) presented at the COP25 climate summit.

According to the Intergovernmental Panel on Climate Change (IPCC), global CO2 emissions must be 18.22 Gt in 2030 for the world to stay below 1.5°C rise in temperature. If we take the global population in 2030 and divide this amount, it would mean that the entire world will have 2.14 tonnes per capita of CO2 in 2030. India is reaching this goal and most importantly, it will do so without adding to the cumulative emissions in the atmosphere.

With the advent of the Paris Agreement and the INDCs submitted by the state parties, a well framed international legal framework, and adequate national commitments are now in place to address the global issue of climate change. The only essential aspect left is ensuring proper and efficient implementation of these commitments. In the light of these developments, climate-smart approaches have to be adopted by all states to mainstream the developmental policies creating enough sectoral and cross-sectoral linkages.

The problem shall not be resolved by the action of a few nations alone. The Paris Agreement rightly recognizes this point and calls for cooperation of all countries and peoples of the world irrespective of their level of development. Still, the global community has to leap one step further in terms of realising the responsibilities.

A new idea of common but differentiated responsibilities and respective capabilities of an individual irrespective of his/her nationality, race or gender needs to be envisioned and propagated in the world at large. After all, each individual needs to contribute and perform his/her part of obligation towards addressing this global issue. It is to be realised that educated, aware and well-to-do citizens share more responsibility as against those who are vulnerable as they are at risk for no fault of theirs. Understanding the urgency of the problem and attitudinal change of individuals are the key factors that will ensure a safe life for present and future generations.

As a developing country, no doubt, India has an excuse to pursue its developmental march based on conventional energy sources. However, the challenge of climate change and the Paris

Agreement provide an opportunity for India to revisit its energy options and redesign its developmental path. The kindness of nature is evident from the fact that the solution to this anthropogenic problem lies with nature itself.

The abundant natural sources of energy i.e. the Sun, the wind, the water are the answers to the issue of climate change. Developmental activities in harmony with nature will prevent harm resulting from the atmosphere and provide a healthy progress. India should promote innovative projects to tap alternative sources of energy. It should also build the capacity of different stakeholders at the national and local levels to deal with climate risk. India should set up Climate Change monitoring Cells (CCMC) at the national, state and district levels for monitoring all the programmes for involving the local expertise and to monitor the level of carbon emission and reduction.

References:

1. The Paris Agreement https://unfccc.int/sites/default/files/resource/parisagreement_publication.pdf
2. India largely on track to meet its Paris Climate Agreement targets, says new report, October 28, 2021
3. India largely on track to meet its Paris Climate Agreement targets, says new report - The Hindu BusinessLine
4. Paris Agreement and India's climate change challenges, Samar Lahiry, 07 February 2017 https://www.downtoearth.org.in/blog/climate-change/paris-agreement-and-india-s-climate-change-challenges-57000
5. The Road from Paris: India's Progress Towards its Climate Pledge https://www.nrdc.org/sites/default/files/india-progress-climate-pledge-2019-ib.pdf
6. India set to update 2030 climate targets under Paris Agreement, Urmi Goswami, October 18 2021 https://economictimes.indiatimes.com/news/india/india-set-to-update-its-2030-climate-targets-under-paris-agreement/articleshow/87098192.cms?from=mdr
7. Paris Agreement, Jstor https://www.jstor.org/stable/24912481
8. India announces its INDC, pledges to cut emission intensity of its GDP by 33-35 per cent by 2030, Jyotsna Singh, Rakesh Kamal, 30 September 2015 https://www.downtoearth.org.in/coverage/climate-change/climate-change-package-51338
9. India's new climate targets: Bold, ambitious and a challenge for the world India's new climate targets: Bold, ambitious and a challenge for the world (downtoearth.org.in)