

REALITY CHECK ON CLIMATE GOALS

The 2022 United Nations Climate Change Conference, or COP27, came and went in November 2022 without much of a critical prognosis in the Indian media or environmental circles. India's official statement at the summit

coasted on what Union Minister for Environment, Forest and Climate Change Bhupender Yadav referred to as "a one-word mantra" set by Prime Minister Narendra Modi, with his penchant for anagrams, at COP26 in November 2021: "Lifestyle for Environment", or "Mission LIFE".

At COP27, India showcased its Long-term Strategy (LTS) for Low Carbon Development. Even a cursory perusal shows that this strategy is based on already-current policies—nothing particularly forward-looking there—and only waves vaguely in a general futuristic direction while trotting out queryable statistical assurances.

In August 2022, India officially submitted its updated NDC (nationally determined contribution) targets, originally set at COP26. The new NDC is essentially a reassertion of the 2030 target.

For reasons of developmental equity between the highly pollutive Global North and the Global South, at COP26, Modi fixed 2070 as India's net-zero greenhouse gas (GHG) emissions year (with the far more polluting US at 2050 and China at 2060—which means that India will continue polluting for longer).

In official bumbf, India is marching resolutely towards a green emissions future. At COP26, Prime Minister Narendra Modi pledged to increase India's non-fossil fuel energy capacity to 500 GW by 2030. By the same year, half of India's electricity would be from renewable sources, with one billion tonnes lower carbon emissions.

In addition, the Draft National Electricity Plan 2022 says that by 2031–32, relative to 2021–22, India is planning to increase solar and wind capacity by six and three times, respectively.

But the Government of India's gung-ho disdains the intricate matter of doability. The globally poor adherence to the 2015 Paris Agreement shows that it is as easy to break steely promises as it is to make them. 500 GW of non-fossil energy is, for instance, four times the existing capacity and eight years too short of making up. Also, the Central Electricity Authority's Draft National Electricity Plan 2022 projects not a drop in coal use but the installation of coal-fired capacity of 267 GW by 2030, which would call for adding 58 GW of net new capacity. Subsidies for fossil fuels remain nine times higher than for renewables. Coal is India's main source of greenhouse gas emissions, the third largest in the world.

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Even carbon-capture storage (CCUS)—which entails capturing waste CO₂ and transporting it to a storage site where it will be sequestered from the atmosphere—envisages the commercial installation of CCUS not before 2030, when emissions are predicted to peak.

India seems to have no emissions or decarbonisation pathway showing how it plans to reach net zero by 2070. First, India has not clarified whether the net-zero by 2070 encompasses all greenhouse gas emissions or just CO₂.



As its population rises and living standards improve, India is also poised to undergo sharp growth in areas that are particularly hard to decarbonise, such as the construction sector

Second, according to the *Getting India to Net Zero* report, commissioned by the High-level Policy Commission on Getting Asia to Net Zero and released in August 2022, India will need an economy-wide investment of \$10.1 trillion, starting right now, to get to net zero by 2070; if the target is advanced to 2050—which many environmentalists consider to be more proactive—the investment would be \$13.5 trillion. These are unrealistic sums, several times India's current GDP. Third, the proportion of coal, oil, and gas in India's primary energy cauldron must fall from 75% to 5% if net-zero is to be reached by 2050—again, infeasible because coal-use is being ramped up.

In 2019, India was the seventh most badly-affected country by extreme weather events—in terms of fatalities (2,267) and economic losses (\$66 billion). In fact, 17 out of 20 Indians (85% of the population of 1.4 billion, or 1.19 billion) are vulnerable to ex-

treme hydrological and meteorological (hydromet) disasters such as floods, drought, and cyclones.

The UK consultancy Verisk Maplecroft, while ranking the environmental and climate-related risks of 576 of the world's largest cities, found that Asia is home to 99 of the 100 most vulnerable cities—of which 43 are in India.

Where is India placed in terms of the promise of the 2015 Paris Agreement to limit the temperature increase to <1.5°C? Poorly, according to Climate Action Tracker (CAT), an independent body that tracks 39 countries and the EU, measuring government climate action against the globally agreed Paris Agreement aim of "holding warming well below 2°C, and pursuing efforts to limit warming to 1.5°C".

India's policies and actions, according to CAT? Insufficient. Fair-share target? Insufficient. Both would lead to a world warmer by <3°C. Internationally supported target? Critically insufficient, it would lead to a world warmer by >4°C.

India's Ministry of Earth Sciences (MoES) agrees with the last, noting in its 2020 report, *Assessment of Climate Change over the Indian Region*, that, based on 1901–2018 data, the rise in the mean surface air temperature over India in the mid-term (2040–69) will be 2.70°C, and 4.44°C in the long-term (2070–99).

Under the Paris Agreement, India is supposed to have 175 GW of installed renewable capacity by December 2022. India later reappraised it to 70%, or 122.5 GW. But Central Electricity Authority data shows that, by November, it was only about 116 GW—34% less than pledged by year-end.

The lag isn't in large renewables facilities alone. India was scheduled to have installed 40 GW of rooftop solar by 2022 but had installed just 6 GW by 2021—or 85% behind its target.

As its population rises and living standards improve, India is also poised to undergo sharp growth in areas that are particularly hard to decarbonise, such as the construction sector. Moreover, according to the International Energy Agency (IEA), "nearly 60% of [India's] emissions in the late 2030s will be coming from infrastructure and machines that do not exist today."

India's environmental plans are far from future-proof.

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