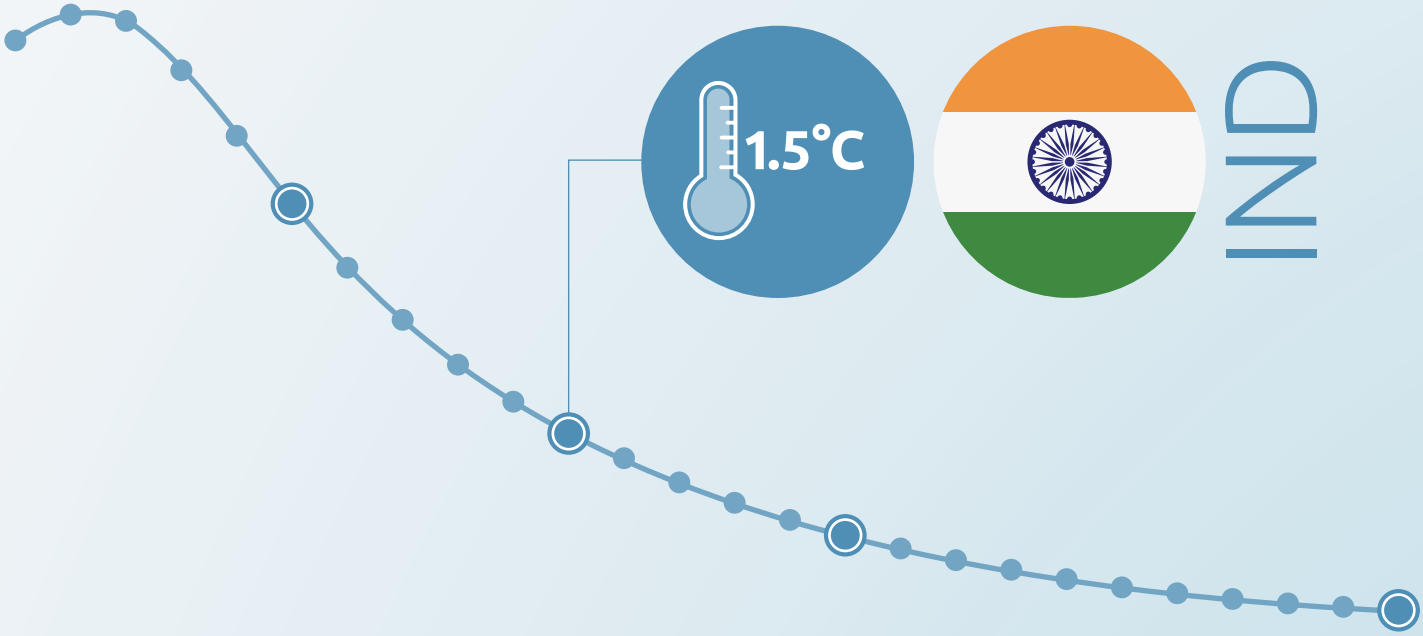
Climate Action Tracker



Climate Action Tracker

1.5°C-compatible climate action and targets: India

August 2025

CLIMATE ANALYTICS
NEW CLIMATE INSTITUTE
IESR Institute for Essential Services Reform

INDIA

India is the world's third-largest greenhouse gas emitter, responsible for 7.8% of global emissions in 2023, although its per capita emissions are low compared to the global average. As a rapidly developing nation, India faces the challenge of meeting steeply rising energy demand and ensuring economic development while peaking and reversing its emissions trajectory.

Despite substantial growth in renewables, India continues to rely heavily on coal for power generation and is gradually increasing its use of fossil gas, particularly in industry and urban areas. This continued fossil fuel expansion is closely tied to rising energy demand, but also reflects a lack of integrated, long-term policy planning to steer the country decisively toward a fossil-free, 1.5°C aligned energy system.

India has a 2030 NDC composed of three main elements (unlike other countries that have expressed their NDC in total GHG emissions reductions):

1. an emissions-intensity target of 45% below 2005 levels by 2030;
2. a target of achieving 50% cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030;
3. the creation of a cumulative carbon sink of 2.5 to 3 $GtCO_2e$ through additional forest and tree cover by 2030. This target does not specifically mention any base year.

Although India's last updated NDC from August 2022 does not explicitly present unconditional and conditional targets, it references the need for international technology transfer and low-cost finance to achieve its goal of 50% cumulative non-fossil electricity capacity by 2030. In our assessment, we interpret this as a conditional target and evaluate it against our modelled domestic pathway. The emissions intensity reduction target is treated as unconditional, as no international support has been indicated as necessary to achieve it. We assess this against India's fair share contribution.[1]

India is on track to meet both targets under its current policies. This indicates clear scope for raising ambition—both unconditionally and conditionally. In fact, as of 2025, India has already achieved its non-fossil capacity target ahead of schedule and is on track to exceed it, potentially reaching 60% or more non-fossil capacity by 2030 under current trajectories. With international support, India could credibly put forward a significantly stronger conditional target in its next NDC.

Since India does not formulate its current NDC as an absolute, economy-wide GHG emissions reductions target, there are large intrinsic uncertainties in assessing the scope and ambition of its intended mitigation action. These uncertainties stem not from data limitations, but from the structure and format of the NDC itself—highlighting the broader challenge posed when countries do not express their contributions as national GHG targets.

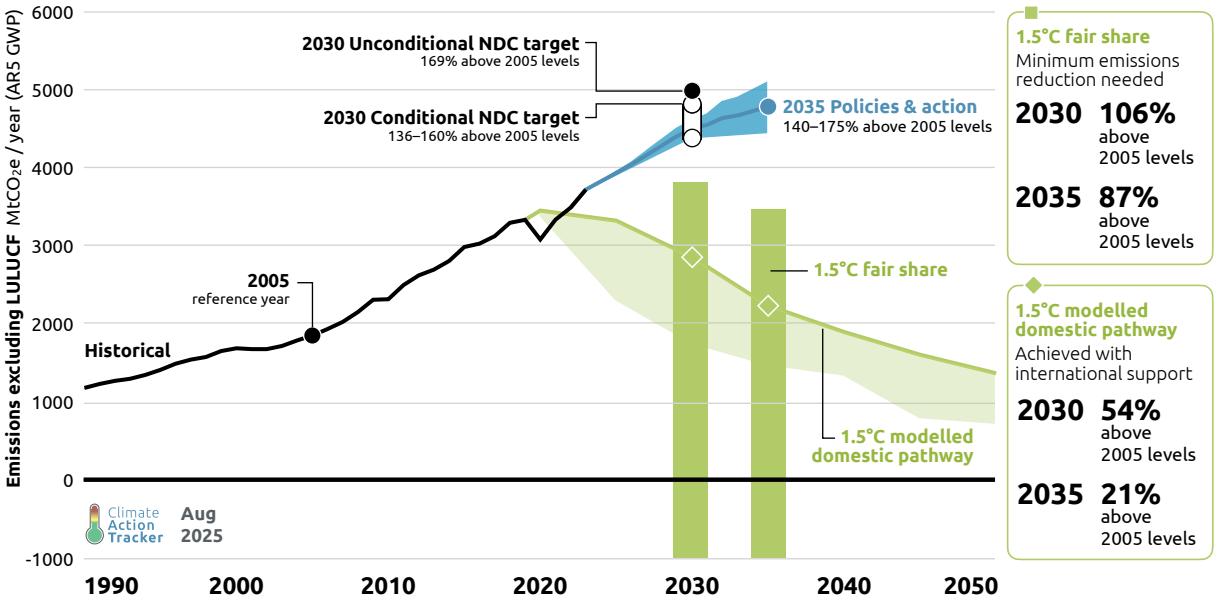
The quantification of India's 2030 intensity target depends on how GDP is measured and might not bring any real emissions reduction given India's fast growing GDP. Similarly, a non-fossil capacity target for 2030 only indicates where emissions could be heading and does not always translate into the same non-fossil share in power generation. Replacing the non-fossil capacity target with a generation target would raise ambition more effectively. To be 1.5°C compatible, renewables would need to contribute to 52-65% of India's electricity generation in 2030. India would need international support to achieve renewables penetration in electricity generation of this magnitude, though it should be able to achieve lower levels of renewables penetration through its own means.

Going forward, India should consider putting forward a national, economy-wide GHG target to improve clarity, enable robust tracking, and align with the global call under the Paris Agreement for all countries to present clear, comprehensive mitigation commitments. International support remains essential to help India achieve such a transition at scale.

India is still set to achieve its 2030 targets under current policies and action. However, with each CAT update of India's emissions under current policies, projected emissions are higher than before. This indicates that India is drifting further away from a 1.5˚C aligned pathway, highlighting the urgent need for it to implement stronger policies and more ambitious targets to reverse this rising emissions trajectory.

1 For further information on the CAT methodology, please see fair share and modelled domestic pathways.

1.5°C-compatible NDC targets for 2030 and 2035



INDIA	2030	2035
INCLUDING land use & forests	Emissions reductions above 2005 levels	
1.5°C modelled domestic pathway	**29%**	**6%**
EXCLUDING land use & forests		
1.5°C modelled domestic pathway	**54%**	**21%**

As global GHG emissions need to be cut roughly in half by 2030 to be in line with the 1.5°C temperature limit, large emitters like India need to get their emissions onto a downward trajectory – not continue rising as its current NDC targets for 2030 allow its emissions to do. However, international support is crucial to achieve that.

An unconditional NDC in line with 1.5°C compatible fair share pathways for India would translate to absolute economy-wide emissions reductions of 106% above 2005 levels by 2030 and 87% above 2005 levels by 2035 (excluding LULUCF). We expect India to be able to achieve these reductions with its own resources. Based on its current policies, India is not on track to achieve this, with emissions reaching around 4,400–4,600 (excl. LULUCF) in 2030 or 137–149% above 2005 levels. Unless checked, they would continue rising to 4,500–5,100 $MtCO_2e$ (excl. LULUCF) or 140–175% above 2005 levels in 2035.

A conditional NDC in line with 1.5°C compatible modelled domestic pathways for India would require absolute economy-wide emission reductions of 54% above 2005 levels by 2030 and 21% above 2005 levels by 2035 (excluding LULUCF). Achieving this level of action will only be possible if India receives significant international support and finance.

Despite substantial progress in rolling out renewables, India's current policies support coal power and production, reaching a record high in the FY 2024-2025, which has slowed the import of thermal coal but not necessarily total coal use for the power sector. Continued expansion of coal-fired power is a major driving force behind the upward trend of India's current policy projections. This highlights the need for India to receive significant international support to achieve emissions reductions of the magnitude required under modelled domestic pathways.

Entry points to increasing climate action

To align with a 1.5°C pathway and raise the ambition of its climate commitments, India could do the following:

Strengthen its 2030 target and set a strong 2035 target: India's current 2030 NDC targets are set at levels that allow emissions to continue rising unchecked under existing policies. For its 2035 target and updated 2030 target, India should adopt an absolute, economy-wide unconditional emissions reduction target aligned with its 1.5°C fair share and specify the support needed—in finance, technology, and capacity-building—to achieve its 1.5°C modelled domestic pathway. Greater transparency in how targets are calculated and reported would further enhance the credibility and effectiveness of India's climate commitments.

Communicate separate targets for LULUCF in its NDC: India's current 2030 NDC contains a separate LULUCF sink target of up to 3 $GtCO_2e$. It should continue having a separate LULUCF target in its 2035 NDC and increase the level of transparency of its LULUCF targets by communicating a corresponding base year. Outlining the level of carbon sequestration through land sink restoration, and other means, that it intends to achieve as part of its overall target would improve understanding of the overall mitigation effort. India should primarily focus on its domestic reductions by decarbonising all sectors of the economy rather than relying on forestry sinks.

Specific target for methane emissions in NDC: with rising concern about methane because of its importance for reducing short-term warming and India being the third largest methane emitter, its 2035 NDC should clearly indicate a 1.5°C aligned reduction target for methane.

Adopt a clear and time-bound coal phase-out strategy: India should develop and implement a plan for an early and just coal phase-out, aiming to reduce coal's share in power generation to 17–19% by 2030 and effectively phase out coal by 2040. This is essential to avoid locking in carbon-intensive infrastructure and to align with a 1.5°C-compatible pathway.

In addition to climate benefits, a coal phase-out would bring significant co-benefits in the form of reduced air-pollution, including improved public health outcomes—especially in densely populated and coal-dependent regions. These co-benefits can strengthen domestic support for a faster transition and reinforce the case for accelerating renewable energy deployment.

Avoid locking in a dependency on fossil fuel imports: India announced its ambition to become a "gas-based economy" in 2016, with a goal of increasing the share of fossil gas in its total energy mix to 15% by 2030. While the share has remained stable at around 6%, the absolute consumption of gas has continued to rise, particularly in the power sector to meet peak summer demand, as well as in industry and residential use. Given that India relies heavily on imported fossil gas, expanding fossil gas use risks increasing energy insecurity and creating new carbon lock-ins. To avoid this, India should establish a clear roadmap for transitioning away from all fossil fuels—including fossil gas—in key end-use sectors such as power, industry, buildings, and transport, aligned with a 1.5°C compatible pathway.

Accelerate renewable integration and grid modernisation: while renewable capacity is growing rapidly, the share of renewables in actual generation remains stagnant at around 20%. To be 1.5°C compatible, 52–65% of India's electricity generation should come from renewables in 2030, increasing to 72–80% in 2035.

Current rollout of wind and solar in India would need to further accelerate to align with 1.5°C and grow five to six times by 2030 reaching 900–1200 TWh.

India is experiencing rapid electricity demand growth, due to its economic progress but also driven by cooling energy demand during extreme heat events. While in 2024-25 non-fossil sources have met much of this additional demand, their deployment has not kept pace with the scale and speed required. To ensure that renewables can reliably displace coal and meet growing peak demand, India must urgently address grid integration challenges, scale up energy storage, and invest in transmission system upgrades.

Phase out fossil fuel subsidies and redirect support: India's fossil fuel subsidies remain several times higher than those for renewables. Phasing out subsidies on coal, and redirecting financial support to clean energy, grid upgrades, and just transition measures would accelerate decarbonisation and reduce stranded asset risks.

Scale up support for electric mobility and industry decarbonisation: India should expand public charging infrastructure for electric vehicles, set clear targets for zero-emission trucks, and support the decarbonisation of industry through green hydrogen and electrification. Current EV adoption remains low, and policy support for green hydrogen is still at an early stage.

For further details on India's climate targets and actions, please see our India assessment.

Authors

Climate Analytics

Sarah Heck
Nandini Das
Sofia Gonzales-Zuñiga
Claudio Forner
Bill Hare

NewClimate Institute

Ana Missirliu
Niklas Höhne

Editing
Cindy Baxter

Design
Designers For Climate Studios

Acknowledgments
We would like to thank the wider CAT team for their work on country assessments, which contributed to this briefing.

CAT The Consortium

The Climate Action Tracker (CAT) is an independent scientific analysis produced by two research organisations tracking climate action since 2009. We track progress towards the globally agreed aim of holding warming well below 2°C, and pursuing efforts to limit warming to 1.5°C.

climateactiontracker.org

Climate Analytics is a non-profit institute leading research on climate science and policy in relation to the 1.5°C limit in the Paris Agreement. It has offices in Germany, the United States, Togo, Australia, Nepal and Trinidad and Tobago.

climateanalytics.org

NewClimate Institute is an independent non-profit organisation that develops solutions to tackle climate change and drives their implementation worldwide. Through research, policy advice and knowledge sharing, we aim to raise the ambition for climate action and support sustainable development.

newclimate.org

Institute for Essential Services Reform (IESR) is an energy and environment focused think-tank that aims to accelerate the energy transition by supporting sustainable mobility, green economy, and well designed climate change policy. IESR has experience mainly in Indonesia, but is expanding its focus to work in other regions and countries.

iesr.or.id