# India’s Updated Nationally Determined Contribution (NDC)

**Mains:** *GS III – Energy|Environment*

## Why in News?

*Recently, India’s updated Nationally Determined Contribution (NDC), approved by the Union Cabinet on March 25, 2026, marks a significant step in its climate policy framework under the United Nations Framework Convention on Climate Change.*

## What are Nationally Determined Contributions (NDCs)?

- **NDCs** – Under the Paris Agreement, all signatory countries are required to periodically submit NDCs.
- These are *voluntary pledges* outlining how each country plans to reduce greenhouse gas emissions and adapt to climate change.
- While submission is mandatory, targets themselves are *not legally binding,* relying instead on transparency, peer pressure, and global cooperation.
- This voluntary nature has led to mixed outcomes globally, raising concerns about their adequacy in limiting global warming to 1.5°C.
- **India’s New NDC & Key Targets –** India’s updated NDC sets the following goals:
  - 60% of installed electric capacity from non-fossil sources by 2035
  - 47% reduction in emissions intensity of GDP (from 2005 levels)
  - Carbon sink of 3.5–4 billion tonnes of $CO_2$ equivalent
- These targets will be formally communicated to the UNFCCC and represent an upward revision of India’s earlier commitments.
- **Comparison with Previous Commitments (2022 NDC) –** India’s earlier NDC, submitted in August 2022, included:
  - 50% non-fossil installed capacity by 2030
  - 45% reduction in emissions intensity
  - Carbon sink of 2.5–3 billion tonnes $CO_2$ equivalent

## What are the key differences?

- **Higher ambition** – Each target has been increased, reflecting greater confidence in India’s clean energy trajectory.
- **Extended timeline** – The shift to 2035 aligns India with global timelines, as most major economies have set 2035 targets.
- **Early achievement** – India has already reached about 52% non-fossil installed capacity by early 2026, surpassing its 2030 target ahead of schedule.
- This demonstrates that India’s renewable energy expansion has outpaced policy

expectations.

## Do NDCs actually drive climate action?

- **Report** – The United Nations Environment Programme Emissions Gap Report 2025 ("Off Target") found that:
  - Current NDCs are insufficient to meet the 1.5°C goal
  - They close less than 14% of the emissions gap
  - Projected warming still ranges between 2.3°C and 2.5°C
- Similarly, assessments by organizations such as World Resources Institute and E3G highlight that:
  - Most countries include partial energy transition goals
  - None provide comprehensive fossil fuel phase-out plans
  - Fossil fuel subsidy reforms are largely absent
- Even the UAE Consensus (2023), which called for tripling renewable capacity and transitioning away from fossil fuels, has not been fully integrated into national commitments.
- The effectiveness of NDCs globally remains contested.
- **Key Insight** – NDCs often document ongoing progress rather than drive it.
- The rapid global growth in renewables—driven by falling costs and industrial competition (especially from China)—has occurred largely independent of NDC mandates.

## What the data shows about India's emissions trends?

- **Data** – Recent emissions data provides encouraging signals.
- A 2025 analysis by the Centre for Research on Energy and Clean Air (published by Carbon Brief) found:
  - India's $CO_2$ emissions grew by just 0.7% in 2025
  - This is the slowest growth rate since 2001 (excluding 2020 pandemic year)
  - Growth had previously ranged between 4% and 11% during 2021–24
- **Power Sector (Key Driver of Deceleration)**
  - Emissions declined by 3.8%
  - Coal-fired generation fell for the first time outside a crisis year since 1973
- Clean energy additions in 2025 included:
  - 47 GW solar
  - 6.3 GW wind
  - 4 GW hydro
  - 0.6 GW nuclear
- These additions were sufficient to meet most of the increase in electricity demand.
- **Heavy Industry (Rising Emissions)**
  - Steel emissions increased by **8%**
  - Cement emissions rose by **10%**
  - These sectors remain difficult to decarbonize and continue to drive emissions growth.
- **Inflection Point for India –** There is growing evidence that India's power sector may soon reach a structural turning point.

- The Central Electricity Authority projects:
  - 786 GW of non-fossil capacity by 2035–36
  - Around 70% of total installed capacity
  - Solar alone exceeding 500 GW
- If clean energy additions consistently match or exceed demand growth, India could enter a phase where power sector emissions plateau or decline structurally.
- **Warranted caution** – 2025 experienced mild weather and weak industrial demand.
- Sustained trends need confirmation over multiple years.

## What are the Key Contradictions in India's Climate Strategy?

- **Continued Expansion of Fossil Fuels**
  - Plans for 100 GW of new coal-fired capacity.
  - $1 trillion investment in petrochemicals by 2040.
  - 50% increase in coal-based steel capacity by 2031.
  - These investments risk locking in carbon-intensive infrastructure.
- **Emissions Intensity vs Absolute Emissions –** India's NDC focuses on emissions intensity (emissions per unit of GDP) rather than absolute emissions.
- This allows total emissions to continue rising.
- Justified on equity grounds, given India's low per-capita emissions.
- However, this approach complicates alignment with global carbon budgets.
- **Renewable Energy vs Grid Constraints –** Over 37 GW of renewable capacity remains stranded.
- Due to transmission and grid integration challenges.
- This highlights the gap between capacity creation and actual utilization.
- **Carbon Sink Commitments –** India aims to create a carbon sink of 3.5–4 billion tonnes $CO_2$ equivalent, primarily through forest cover.
- Challenges include:
  - Forest cover remains around 24%, below the 33% target.
  - Reliance on "trees outside forests," which may be less reliable.
  - Competing land-use pressures from urbanization and industry.
- **Broader Implications for Climate Policy –** India's updated NDC reflects both progress and pragmatism:
- **Positives**
  - Demonstrates rising ambition.
  - Aligns with global timelines.
  - Builds on strong renewable energy momentum.
  - Signals leadership among developing countries.
- **Limitations**
  - Does not commit to fossil fuel phase-out.
  - Relies heavily on intensity-based metrics.
  - Faces implementation bottlenecks (grid, finance, land use).

## What lies ahead?

- India's updated NDC represents a significant escalation in climate ambition, particularly in renewable energy and emissions intensity reduction.

- The country’s recent emissions data—especially the slowdown in 2025—suggests that structural changes may already be underway, driven largely by the rapid expansion of clean energy.
- However, the effectiveness of NDCs as policy instruments remains limited. Globally and domestically, they tend to reflect existing trends rather than initiate transformative change.
- India’s continued investments in coal, industrial expansion, and infrastructure gaps underscore the tension between development imperatives and climate goals.
- The coming decade will be Whether India can reconcile these contradictions—by accelerating grid reforms, curbing fossil expansion, and strengthening institutional capacity—will determine if its NDC becomes a driver of deep decarbonization or merely a record of incremental progress.

**Reference**

The Hindu| India’s New NDC

