



## Net-Zero Emissions Target

**For Prelims:** Net Zero Emissions, Nationally Determined Contribution (NDC), 'Lifestyle for Environment (LIFE), Green Climate Fund (GCF), India Cooling Action Plan (ICAP), Bureau of Energy Efficiency (BEE), Efficiency Services Limited (EESL), Compensatory Afforestation Management and Planning Authority (CAMPA), Hydrogen Energy Mission.

**For Mains:** Essential Steps taken by India to Achieve Net-Zero Emission Target.

### Why in News?

According to the report by **Getting India to Net Zero**, India needs a massive USD 10.1 trillion investment from now on if India is to achieve its [net-zero emissions target](#) by 2070.

### What are the Key Highlights of the Report?

- **Investment:**
  - The investment required by India would be USD 13.5 trillion if the net zero emission target is to be met by 2050.
- **Nationally Determined Contribution (NDC):**
  - India's [Nationally Determined Contribution \(NDC\)](#) targets set in 2015 are likely to be met early within the next few years through current policies.
- **Peak Emission:**
  - India could peak in emissions as soon as 2030.
- **Benefits:**
  - Achieving net zero by 2070 would **increase annual GDP by up to 4.7% by 2036. and create 15 million new jobs by 2047.**
- **Suggestions:**
  - Suggested various policies to **boost renewables and electrification** could make net zero possible by mid-century.
    - Ending new coal by 2023 and transitioning from unabated coal power by 2040, would be particularly impactful for reaching net zero emissions closer to mid-century.

### What is Net-Zero Target?

- It is referred to as **carbon neutrality**, which does not mean that a country would bring down its emissions to zero.
- Rather, it is a **state in which a country's emissions are compensated by the absorption and removal of greenhouse gases from the atmosphere.**
  - Further, **absorption of the emissions can be increased by creating more carbon sinks** such as forests.
    - While the removal of gases from the atmosphere requires **futuristic technologies such as carbon capture and storage.**
- More than 70 countries have promised to become Net Zero by the middle of the century i.e., by

2050.

- India has promised to cut its emissions to net zero by 2070 at the [conference of parties-26\(COP\)](#) summit.

## What Steps Have been taken by India to Achieve Net- Zero Emissions by 2070?

### ▪ India's Renewable Energy Targets:

- India's [renewable energy targets](#) have steadily become more ambitious, from **175 GW by 2022 declared at Paris, to 450 GW by 2030 at the UN Climate Summit, and now 500 GW by 2030**, announced at COP26.
- India has also announced the **target of 50% installed power generation capacity from non-fossil energy sources by 2030**, raising the existing target of 40%, which has already been almost achieved.

### ▪ Goals of NDC:

- There are EIGHT **GOALS** which are identified as follows:
  - To put forward and further propagate a **healthy and sustainable way of living based on traditions and values of conservation** and moderation, including through a mass movement for '**LIFE**'- '**Lifestyle for Environment**' as a key to combating climate change.
  - To **adopt a climate-friendly and cleaner path** than the one followed hitherto by others at the corresponding level of economic development.
  - To **reduce the Emissions Intensity of its GDP by 45%** by 2030, from the 2005 level.
  - To achieve about **50% cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030**,
    - With the help of the **transfer of technology and low-cost international finance including from the [Green Climate Fund \(GCF\)](#)**.
  - To create an **additional carbon sink of 2.5 to 3 billion tonnes of CO<sub>2</sub>** equivalent through additional forest and tree cover by 2030.
  - To better **adapt to climate change by enhancing investments in development programmes in sectors vulnerable to climate change**, particularly agriculture, water resources, the Himalayan region, coastal regions, and health, and disaster management.
  - To **mobilize domestic and new & additional funds from developed countries to implement the above mitigation and adaptation** actions in view of the resource required and the resource gap.
  - To build capacities, and **create a domestic framework and international architecture for quick diffusion of cutting-edge climate technology** in India and for joint collaborative R&D for such future technologies.

### ▪ Initiatives:

- **Solar Energy:**
  - India has undertaken one of the world's largest solar energy installation initiatives.
    - Irrespective of whether it achieves the 175 GW capacity by 2022 or the 450 GW target by 2030,
- **Creating Carbon Sinks:**
  - [India Cooling Action Plan \(ICAP\)](#) will help address cooling requirements and reduce the cooling demand in the country.
    - [The Bureau of Energy Efficiency \(BEE\)](#) and Energy [Efficiency Services Limited \(EESL\)](#) has taken a number of initiatives under the **National Mission for Enhanced Energy Efficiency (NMEEE)** to combat climate change.
    - The [Compensatory Afforestation Management and Planning Authority \(CAMPA\)](#) Fund created under the Compensatory Afforestation Fund Act, 2016, has thousands of crores which will hopefully be utilised soon to compensate for deforestation and restore the green cover comprising native species of trees.
- **Hydrogen Energy:**
  - India has also announced a [Hydrogen Energy Mission](#) for grey and green hydrogen.

## Way Forward

- India's net-zero targets and updated NDCs are certainly aspirational, keeping in mind its development needs during the post-COVID recovery.
  - However, they fit a **general pattern of incremental progress on climate action at the global level that lacks the collective sense of urgency** required to limit global warming to 1.5 degrees Celsius below pre-industrial levels.
  - Further, whether India and the world can go with limited short-term emissions reduction and ambitious long-term climate action plans is something that remains to be seen.

### UPSC Civil Services Examination Previous Year Question (PYQ)

#### Prelims

**Q. The term 'Intended Nationally Determined Contributions' is sometimes seen in the news in the context of (2016)**

- (a) pledges made by the European countries to rehabilitate refugees from the war-affected Middle East
- (b) plan of action outlined by the countries of the world to combat climate change
- (c) capital contributed by the member countries in the establishment of the Asian Infrastructure Investment Bank
- (d) plan of action outlined by the countries of the world regarding Sustainable Development Goals

**Ans: (b)**

**Exp:**

- **Intended Nationally Determined Contributions is the term used under the UNFCCC for reductions in greenhouse gas emissions in all countries that signed the Paris Agreement.**
- At COP 21 countries across the globe publicly outlined the actions they intended to take under the international agreement. The contributions are in the direction to achieve the long-term goal of the Paris Agreement; "to hold the increase in global average temperature to well below 2°C to pursue efforts to limit the increase to 1.5°C, and to achieve net zero emissions in the second half of this century." **Therefore, option (b) is the correct answer.**

#### Mains

**Q. Describe the major outcomes of the 26<sup>th</sup> session of the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC). What are the commitments made by India in this conference? (2021)**

**Source: IE**