

## Global Carbon Budget

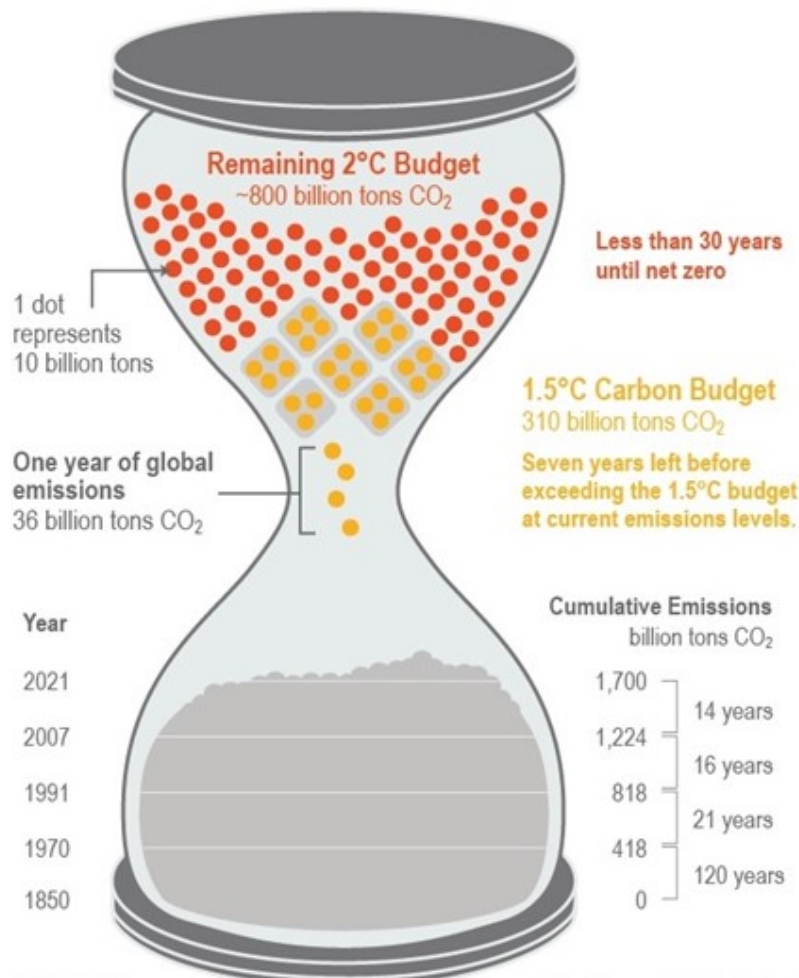
### Why in news?

India needs to secure a fair and equitable share of the global carbon budget at [COP 28](#), as it is a key factor for limiting global warming.

### What is a global carbon budget?

- **Global Carbon Budget** - It is the amount of CO<sub>2</sub> that humanity can emit while still having a chance to contain global warming within 1.5°Celsius compared with preindustrial levels, as advocated by the *Paris Agreement*.
- It is taken from the atmosphere, regional carbon emissions, CO<sub>2</sub> emissions from land usage, carbon emissions from man-made projects in many forms.
- It is produced under the umbrella of ***Global Carbon Project (GCP)***.
- It is part of the greater carbon cycle and the ways in which the Earth's reservoirs of carbon are added to and subtracted from.
- The budget is estimated to be around ***1 trillion tonnes of carbon***.
- **Need-** To understand how CO<sub>2</sub> emissions (both natural and manmade) are contributing to the changes in the Earth's environment.

## The Earth's Carbon Budget



As per Intergovernmental Panel on Climate Change's Sixth Assessment Report (IPCC AR6), every 1,000 billion tonnes of CO<sub>2</sub> in emissions causes an estimated 0.45°Celsius rise in the global surface temperature.

### What is the significance of global carbon budget?

- **Limits global warming**- It establishes how much CO<sub>2</sub> can be emitted without exceeding the temperature goals of the *Paris Agreement*.
- **Set targets**- It helps to set emissions reduction targets in a fair and effective way, based on the scientific evidence and value judgments.

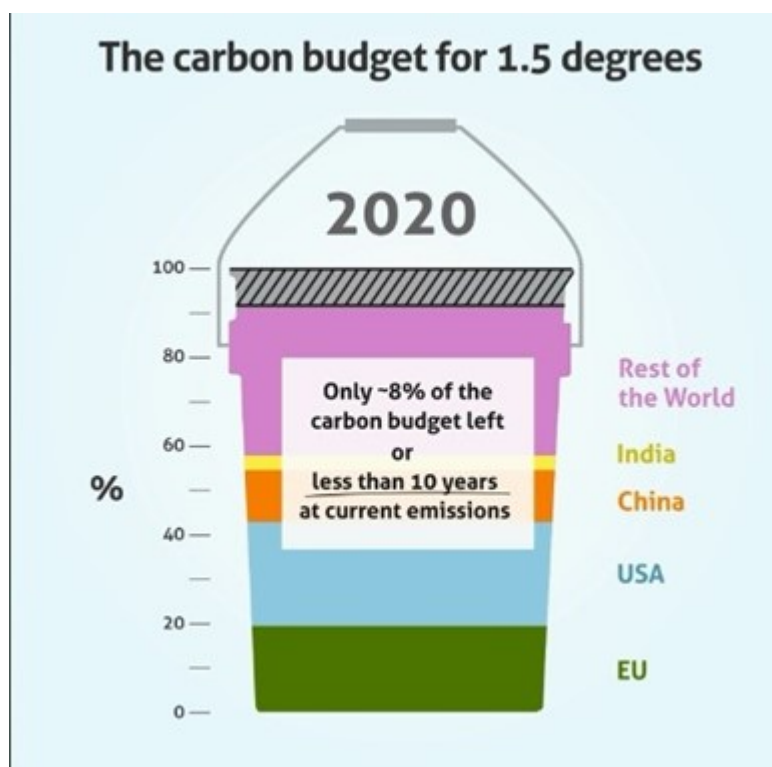
IPCC AR6 has shown that almost four-fifths of the global carbon budget stands depleted and only a fifth remains to meet the target set in the Paris Agreement.

- **Clean energy**- It encourages the development of alternative energy resources and more efficient ways to use energy, by making carbon-emitting fuels more expensive.
- **Fund**- It generates revenue that can be used to fund clean-energy technologies, compensate the affected people, or reduce other taxes.
- **Climate science**- It will help countries to stay within the remaining warming limit.

- **Road to net zero-** Governments can measure how well they are doing in reducing their climate impact.
- **Impetus to CBDR-** It boosts Common But Different Responsibilities (CBDR) that was formalized at the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro.

### How does the carbon budget matter for India?

- **Carbon inequality-** Developed countries have appropriated a disproportionately larger share of the global carbon budget to date.
- South Asia, including India, has low historical and per capita emissions compared to North America and the world.
- **Carbon equity-** Developed countries should take more responsibility for reducing emissions and provide finance and technology to developing countries.
- India must recognize its fair share of the carbon budget as a strategic national resource, and demand it at the COP28 climate talks.



- **Development-** It is the first defence against climate change, India has made progress in reducing poverty and providing food security to millions of people, especially after the COVID-19 pandemic.

*As per NITI Aayog- U.N. Development Programme's Multidimensional Poverty Index Report 2023 review, India has been able to lift more than 135 million poor out of poverty in less than 5 years (2015-2021).*

- **Non-discriminatory-** Developed countries have pressured developing countries to phase out coal, but have failed to do so themselves.

## Climate Friendly Initiatives of India

- **International Solar Alliance-** It was a joint effort by India and France to mobilize efforts against climate change through deployment of solar energy solutions launched in 2015.
- **Coalition for Disaster Resilient Infrastructure-** It is an international climate initiative by India in 2019 to promote resilient climate-proof critical infrastructure in member countries.
- **Global Biofuel Alliance-** It is an alliance driven by *India, the United States, and Brazil*, to accelerated adoption of biofuels, creating new biofuels, setting globally recognized standards, identifying global best practices, and ensuring industry participation.
- **LiFE mission-** Lifestyle for Environment is an international mass movement to protect and preserve the environment launched in COP 26 at Glasgow in 2021.

## Quick facts

### Paris Agreement

- It is a legally binding international treaty on climate change.
- **Launch year-** In 2015 and was adopted by 196 countries.
- **Aim-** To limit the global average temperature rise to well below 2°C above pre-industrial levels, and pursue efforts to limit it to 1.5°C.
- **Nationally Determined Contributions (NDCs)** - Since 2020, countries submit national climate actions to reduce their greenhouse gas emissions in order to reach the goals of the Paris Agreement.

## References

1. [The Hindu- Global carbon budget at stake in COP 28](#)
2. [WEF- Carbon budget net zero](#)