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 CO2 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, CO2 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 CO2 emissions (both natural and manmade) are contributing to the changes in the Earth's environment.

As per Intergovernmental Panel on Climate Change's Sixth Assessment Report (IPCC AR6), every 1,000 billion tonnes of CO2 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 CO2 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

