

Emissions Gap Report 2022

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In news- The Emissions Gap Report 2022: The Closing Window – Climate crisis calls for rapid transformation of societies was released by the UNEP recently.

Key findings-

- The report is the **13th edition in an annual series** that provides an overview of the difference between where greenhouse emissions are predicted to be in 2030 and where they should be to avert the worst impacts of climate change.
- The report focused on the need for countries to take significant steps to reduce greenhouse gas emissions ahead of the United Nations Climate Change Conference 2022 (UNFCCC COP 27) that will begin on November 6 in Egypt.
- The flagship **report is managed by the UNEP Copenhagen Climate Centre**. It serves as a “**scientifically authoritative source of timely and policy-relevant information to key decision-makers,**” guiding the UNFCCC process and implementing the Paris Agreement.
- **The top seven emitters (China, the EU27, India, Indonesia, Brazil, the Russian Federation and the United States of America)** plus international transport **accounted for 55 per cent of global GHG** (greenhouse gas) emissions in 2020.
- The Paris Agreement, adopted by 196 countries in 2015 at COP 21, was aimed at limiting global warming and maintaining the average global temperature rise, ideally, to below 1.5°C.
- **According to the 2022 report, the national pledges taken by countries since last year only make a “negligible difference”** to predicted 2030 emissions.

- These pledges or the Nationally Determined Contributions (NDC), **only reduce the emissions by 1 per cent by the end of the decade.**
- With the current policies, **the global temperature is expected to rise by 2.8°C by the end of this century,** and emissions should be cut down by 45 per cent globally to maintain the goal temperatures.
- It emphasised transformative solutions across sectors, including food systems.

Focus on Food systems & livestock-

- **Food systems comprise all food products, derived from crop and livestock production,** forestry, fisheries, and the larger socio-economic systems surrounding them.
- While other sectors are dominant in the global climate action plans, food systems are neglected.
- This often prevents the people from recognizing emissions produced as a result of their consumption and production patterns, as well as of livestock.
- **In a first, New Zealand recently planned to tax agricultural emissions, which includes those from livestock burps and waste,** in an attempt to “transition to a low emissions future” and fulfil its promise “to price agriculture emissions from 2025”.
- **Emissions from livestock mainly include carbon dioxide** (from urea), nitrous oxide (from livestock dung and urine), and methane (from belching) among others.
- **They contribute towards the greenhouse effect as due to these gases,** heat gets trapped around the surface of the earth and causes global warming.
- According to the Intergovernmental Panel on Climate Change (IPCC), **the Global Warming Potential (GWP) of gases is a metric that helps measure “the radiative effect** (determined by the ability to absorb energy) of each unit of gas” over a specific period of time such as 100 years, “as expressed relative to the radiative

effect of carbon dioxide.”

- **While nitrous oxide is emitted through livestock dung and urine, and carbon moves** in the atmosphere in various forms, looking at the production of methane gives us a better insight into effective ways in which countries can tackle climate change.
- **Manure and gastrointestinal releases account for about 32 per cent of human-caused methane emissions.** In the livestock sector, popular belief says cow flatulence is a bigger source of methane than cow belching.
- Further, the cultivation of paddy, which floods the fields, prevents oxygen from penetrating the soil and creates suitable conditions for methane-emitting bacteria. This accounts for roughly 8 percent of human-linked emissions.
- An IPCC research showed **methane is responsible for at least a quarter of today’s global warming.**
- An assessment by the UNEP and Climate and Clean Air Coalition in 2021 found that cutting human or farming-related methane emissions by “45 per cent this decade” is key in the global battle against climate change.