



India's Ratification of Kigali Amendment

Why in news?

India has decided to ratify the Kigali Amendment to the Montreal Protocol.

What is the Montreal Protocol (1989)?

- It is an international treaty that regulates the production and consumption of nearly 100 man-made chemicals referred to as ozone depleting substances (ODS).
- The ODS, when released to the atmosphere, damage the 'stratospheric ozone layer' that protects the earth against the harmful levels of UV radiation from the sun.
- It mandated the complete phase-out of chlorofluorocarbons or CFCs and other ODS.

CFCs are a set of chemicals mainly used in the air-conditioning and refrigeration industry earlier.

Extensive use led to depletion of the ozone layer, and formation of an "ozone hole" over the Antarctic region.

- CFCs were gradually replaced, first by **hydrochlorofluorocarbons (HCFCs)**.
- Eventually, **hydrofluorocarbons (HFCs)** were introduced as non-ozone depleting alternatives to support the timely phase out of CFCs and HCFCs.

What was the problem with HFCs?

- HFCs do not deplete the ozone but are **powerful greenhouse gases** (GHGs) with high Global Warming Potential (GWP).
- It is essential to phase out HFCs as-
 1. Global warming is emerging as one of the biggest global challenges.
 2. Air-conditioning demand is showing a significant increase, especially in countries like India.

The average GWP of 22 of the most used HFCs is about 2,500 times that of CO₂. If left unabated, HFCs might contribute to annual GHG emissions up to 19% by 2050.

So, what is the Kigali amendment?

- The Montreal Protocol was amended in 2016 (9th time) after negotiations in Kigali, the capital of Rwanda.
- It essentially enables the **gradual phase-down of hydrofluorocarbons**, or HFCs.
- The terms entered into force in 2019, and have been signed by more than 122 countries so far.

Group I: Rich & developed economies like USA and EU; Started phase down HFCs by 2019 and reduce it to 15% of 2012 levels by 2036

Group II: Emerging economies like China, Brazil start phase down by 2024 and reduce it to 20% of 2021 levels by 2045.

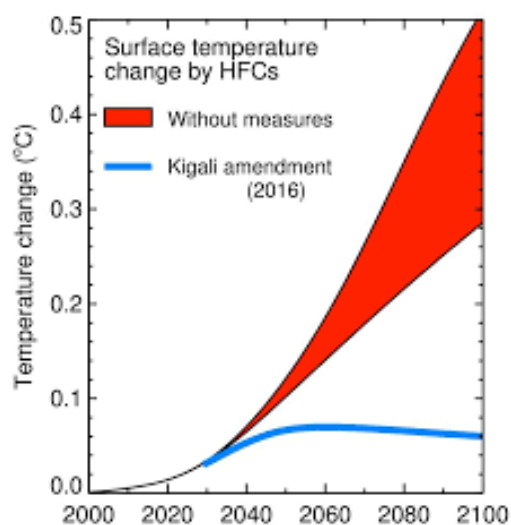
Group III: Developing economies and some of the hottest climatic countries like India, Pakistan, Iran, Saudi Arabia starts phasing down by

2028 and reduce it to 15% of 2024-2026 levels till 2047.

HFCs reduction as per the countries' commitments is estimated to reduce Earth's average surface warming by 0.5°C over pre-industrial era levels.

Why HFC is under the Montreal protocol if it is not an ODS?

- Being non-ozone-depleting, HFCs reduction was under the 1997 Kyoto Protocol and 2015 Paris Agreement that addressed GHG emissions and climate change.
- But the Montreal Protocol has –
 1. far more effective and successful than the climate change instruments
 2. already resulted in the phase-out of 98.6% of ODS.
 3. to date, the only UN treaty ever that has been ratified by every country - all 198 UN Member States
- So, it was decided to use the Montreal Protocol to phase out HFCs.



How is India's performance?

- According to Climate Action Tracker, India is one of the few countries whose

actions are compatible with keeping warming below 2°C.

- The climate actions of different countries are rated as below:
 1. Australia, Brazil, Canada, the UK and all of Europe - 'Insufficient'
 2. China, Japan and South Africa - 'Highly insufficient'
 3. Argentina, Russia, Saudi Arabia and Turkey - 'Critically insufficient'
- India recently crossed the milestone of 100 GW of installed renewable energy capacity.
- India will also draw up a national strategy for phase-down of HFCs by the year 2023 in 'consultation with all industry stakeholders.'
- Amendments to the Ozone Depleting Substances (Regulation and Control) Rules will be done by mid-2024.
- Also read about - '[India Cooling Action Plan](#)'

What are the concerns?

- Overall energy policy pushes for both renewable and fossil-fuel-based energy production.
- E.g., Draft National Electricity Policy 2021 said India would build more **coal power plants** given its cost-effectiveness.
- Centre's attempts to allow violators to 'pay and pollute' undermines the other efforts.
- Fossil fuel producers, mostly from Russia, US and the Middle East, have begun entering India, seeing it as one of the last big markets for fossil fuels.

- These realities suggest that India's energy transition will see a delay.

Source: The Indian Express, The Wire



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