

Kigali Agreement

1) Introduction

- A historic global climate deal was reached in Kigali, Rwanda at the Twenty-Eighth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer (MOP28)
- The so called Kigali Amendment which amends the 1987 Montreal Protocol aims to phase out Hydro fluorocarbons (HFCs), a family of potent greenhouse gases by the late 2040s.
- Growth of HFCs has mainly been driven by a growing demand for cooling, particularly in developing countries with a fast-expanding middle class and hot climates.

2) MONTREAL PROTOCOL

- The Montreal Protocol is the international treaty to protect the environment against harmful substances.
- It is considered to be one of the most successful experiments on any environmental issue in the world.
- This was conceived after identifying a large hole in earth's ozone layer over Antarctica.
- The main aim of Montreal Protocol is to end the use of chlorofluorocarbons.
- Subsequently, Chlorofluorocarbons were replaced by Hydro fluorocarbons (HFCs).
- The biggest problem with HFCs is their contribution to global warming by trapping heat radiating off the Earth.
- Montreal Protocol has undergone number of revisions and is successful in eliminating CFCs to a larger extent.
- This is one such amendment, but with greater impact on global warming.

3) Highlights of Kigali Agreement

- Around 197 countries, including India, China and the USA, agreed at Kigali to reduce the use of HFCs by roughly 85% of their baselines by 2045.
- It amends the 1987 Montreal Protocol.
- It is proposed to reduce Hydro fluorocarbons (HFCs).
- **The agreement has got three separate pathways for different countries.**
 - a) Richer countries like the European Union, the USA and others will start to limit their use of HFCs within few years and make a cut-off of at least 10% from 2019.
 - b) Overall, these countries will reduce them to about 15% of 2010-12 baseline levels by 2036.
 - c) China, Brazil and some other developing countries will freeze Hydro fluorocarbons use by 2024, cutting it to 20% of 2020-22 baseline levels by 2045.

d) India is a part of the third group along with Iran, Pakistan, and Saudi Arabia etc. That will be freezing HFCs only by 2028 and reducing them to about 15% of 2024-26 baseline levels by 2047.

- Overall, Kigali deal will result in reducing the global temperature rise by 0.50C
- As it is an amendment to Montreal Protocol, it will bind countries to their HFCs reduction schedules from 2019.
- There are also penalties for noncompliance
- Overall, the deal is expected to result in the reduction of an equivalent 70 bn tonnes of carbon dioxide from the atmosphere.
- The Agreement upholds the principle of Common but Differentiated Responsibilities and Respective Capabilities
- The countries negotiating at Kigali also agreed to provide adequate financing for HFCs reduction—which runs in billions of dollars globally.
- The agreement at Kigali provides for exemptions for countries with high ambient temperatures to phase down HFCs at a slower pace.

4) Harmful HFCs

- Hydro fluorocarbons are widely used in fridges, air-conditioning and aerosols sprays.
- These are a family of Greenhouse gases.
- They are at present the fastest growing greenhouse gases with emissions increasing by around 10% every year.
- They trap thousands of times more heat in the earth's atmosphere than carbon dioxide.
- These factory-made gases had replaced CFCs under the 1987 Montreal Protocol to protect Earth's fragile protective Ozone layer and heal the ozone hole over the Antarctica.
- HFC-23, a potent greenhouse gas with global warming potential of 14,800 times more than that of CO₂, is a by-product of HCFC-22, which is used in industrial refrigeration.

5) India and Kigali Agreement

- India joins the nations of the world in lauding the Hydro fluorocarbon (HFC) Amendment to the Montreal Protocol
- About 2% to 3% of India's households have ACs, the demand for which is expected to grow at 20% per annum.
- India had announced that it will eliminate the use of HFC-23, a greenhouse gas that harms the ozone layer, by 2030.
- Alternatives such as Hydro fluoroolefins (HFOs) are expensive and will have a bearing on the cost structure.

- Most of the alternative gases are not manufactured in India currently and some of these have got patent rights to somewhere around 2025.
- The cost burden also includes onetime cost of the product re-design, servicing equipment, training of personnel etc,
- The agreement recognizes the development imperatives of high-growth economies like India, and provides a realistic and viable roadmap for the implementation of a phase-out schedule
- This will also provide a mechanism for countries like India to access and develop technologies that leave a low carbon footprint.
- The Kigali amendment is a signal to industry and entrepreneurs in India and across the world to develop viable and scalable climate solutions.
- India needs to invest and encourage in research and development of alternatives.
- Domestically, it needs to push industry segments that are able to make the transition to climate-friendly refrigerant gases soon and not wait till 2028 to begin the process.
- Need to align its goals for 'Make in India' with green technologies in order to remain competitive in global markets.

6) How it is different from Paris agreement?

- The Paris agreement which will come into force by 2020 is not legally binding on countries to cut their emissions.
- The Kigali Amendment is considered vital for reaching the Paris Agreement target of keeping global temperature rise to below 2-degree Celsius
- It is a clear statement by all world leaders that the green transformation started in Paris is irreversible and unstoppable.

7) Solution

- Alternatives to HFCs should be explored which include substances such as hydrocarbons, ammonia and carbon dioxide which are widely available, safe, approved and on the market.
- Super-efficient, cost-effective cooling technologies are also being developed, which can help protect the climate both through reducing HFCs emissions and by using less energy
- Grants for research and development of affordable alternatives to hydro fluorocarbons will be the most immediate priority
- It now needs to encourage institutions and industry to participate through time-bound programmes to develop alternative refrigerant gases that will not harm the planet.