

## Kigali Agreement [UPSC Environment & Ecology]

The Kigali Agreement is an important amendment to the Montreal Protocol. This topic is in the environment and ecology segment of the [UPSC syllabus](#). In this article, you can read all about the Kigali Agreement relevant for the IAS exam.

### Kigali Agreement

The **Kigali Agreement is an amendment to the Montreal Protocol**, which is an environmental treaty signed by countries to phase out Ozone Depleting Substances (ODSs) from the earth's atmosphere.

- After coming into force in 1989, the Montreal Protocol has undergone many amendments.
- The Kigali Amendment is the 8th amendment.
- It happened during the 28th Meeting of Parties when the 197 member countries signed the agreement to amend the Montreal Protocol.
- It is so named because it happened in Kigali, the capital of Rwanda in October 2016.
- According to the terms of the Amendment, the signing countries are expected to decrease the manufacture and usage of hydrofluorocarbons (HFCs) by about 80-85% from their baselines until 2045.
- This will curb global warming (by arresting global average temperature rise up to 0.5 degree Celsius) by the year 2100.
- The Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer entered into force on 1st January 2019, following ratification by the required number of countries.
- The agreement aims to phase down HFCs by reducing its manufacture and consumption.
- HFCs are used as replacements for chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) since they (HFCs) do not have any impact on the depletion of the ozone layer.
- However, HFCs are powerful [greenhouse gases](#).
- The Montreal Protocol is made even more potent in the fight against greenhouse gases with the Kigali Amendment.

### Hydrofluorocarbons (HFCs)

Hydrofluorocarbons are organic compounds that contain fluorine and hydrogen atoms.

- They are the most common kind of organofluorine compounds.
- They are specifically manufactured, unlike other greenhouse gases which are mostly waste/byproducts.
- HFCs are used as replacements for CFCs and HCFCs.
- They are used in air conditioning and as refrigerants.
- **Even though HFCs do not cause ozone layer depletion, they are super greenhouse gases. They cause global warming.**
- Their potential to cause global warming is a thousand times more than other GHGs such as methane, carbon dioxide, etc.
- Examples: HFC-23, HFC-134a

### Kigali Agreement Important Features

The Kigali Agreement is significant because it addresses the vital question of HFCs. HFCs are powerful greenhouse gases and to mitigate climate change, it is essential that countries strive to reduce and gradually

phase out their production and usage. Hence, the Kigali Agreement assumes significance. The important features of this agreement are briefly described below.

- It is a legally binding agreement between the signatories. And, there are non-compliance measures to ensure its implementation.
- It sets different targets for countries depending upon the states of development, different socio-economic constraints, and varying technological and scientific capacities.
- The Kigali Agreement upholds the principle of Common but Differentiated Responsibilities and Respective Capabilities.
- The agreement classifies the signatory parties into three as per the phase-down schedules to freeze and reduce the production of HFCs.
  - The first group consists of developed countries, led by the US and the European Union countries, that would have started the phase-down of HFCs by 2019, and reduce the level to 15% of 2012 level by the year 2036.
  - The second group consists of developing economies such as China, Brazil and also some African States that will start the phase-down by 2024 and decrease it to 20% of 2021 levels by the year 2045.
  - The third group (in which India is placed) consists of developing economies and also some of the hottest nations, that will start the phase-down by 2028 and reduce the level to 15% of 2024-26 levels by the year 2047. Examples: Pakistan, Iran, Saudi Arabia.

	<b>A5 Group 1</b>	<b>A5 Group 2</b>	<b>A2</b>
<b>Baseline</b>	2020-2022	2024-2026	2011-2013
<b>Formula</b>	Average HFC consumption	Average HFC consumption	Average HFC consumption
<b>HCFC</b>	65% baseline	65% baseline	15% baseline*
<b>Freeze</b>	2024	2028	-
<b>1st step</b>	2029 – 10%	2032 – 10%	2019 – 10%
<b>2nd step</b>	2035 – 30%	2037 – 20%	2024 – 40%
<b>3rd step</b>	2040 – 50%	2042 – 30%	2029 – 70%
<b>4th step</b>			2034 – 80%
<b>Plateau</b>	2045 – 80%	2047 – 85%	2036 – 85%

*\* For Belarus, Russian Federation, Kazakhstan, Tajikistan, Uzbekistan 25% HCFC component of baseline and different initial*

\*source: Down to Earth Magazine

## Kigali Agreement and India

India is a signatory to the Kigali Agreement. India consumes only 3% of HFCs and so, it has agreed to a lenient schedule compared to other nations like the US (consumes 37%) and China (consumes 25%).

- According to the treaty, India should start phase down by 2028 and cut HFC emission by 15% of 2024-26 levels by the year 2047.
- Even though this is the easiest schedule compared to the other groups, considering India's ambitious [‘Make in India’](#) mission, even this is difficult.
- Since ours is a developing economy, there are financial implications of the Kigali amendment on India.
- If the country is to entirely give up HFCs, more investment is to be done on research and

development on alternatives.

- Being a tropical country, air conditioners and refrigerators are used extensively in many regions, and their use is only increasing. There is a huge demand for cooling appliances.
- If companies are to invest more in R&D, or even in acquiring patents, product prices are likely to go up, which will in turn, cause the market to lose its customer base.
- Despite challenges in implementing the agreement, India had announced domestic action on HFC-23 (trifluoro-methane), a super greenhouse gas, taking into account the environmental concerns.

## **UPSC Questions related to Kigali Agreement**

### **What is Kigali Amendment?**

It is an amendment to the Montreal Protocol.

### **Is Kigali Agreement binding?**

It is a legally binding agreement between the signatories.

### **How many countries have ratified the Kigali Amendment?**

It has been ratified by 65 countries.