

## World Meteorological Organisation (WMO) - UPSC Notes

The World Meteorological Organisation (WMO) is a specialised agency of the [United Nations](#). In this article, you can read all about the United Nations World Meteorological Organisation (WMO) and its functions along with its relevance to the [IAS Exam](#).

International organisations and groupings are an important part of the International Relations section of the General Studies paper-2 in the [UPSC Syllabus](#).


### World Meteorological Organisation (WMO)

Established in 1950, the World Meteorological Organisation (WMO) is an intergovernmental organisation that originated from the International Meteorological Organisation (IMO).

- The International Meteorological Organisation (IMO) had its roots in the Vienna International Meteorological Congress of 1873.
- It became a specialised agency of the UN in 1951.
- The United Nations Economic and Social Council is the parent organization of the UN's WMO.
- WMO celebrated its 70th Anniversary in 2020.

UPSC PRELIMS FACTS

## WMO



**Name:** World Meteorological Organisation (WMO)  
A specialized agency of the UN

**Year of Formation:** 1950

**HQ:** Geneva, Switzerland

**Sector:** Meteorology

**Is India a member?** Yes

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The World Meteorological Congress is the supreme body of the WMO. It is headed by its Secretary-General. The Executive Council implements its decisions, while six Regional Associations are responsible for the coordination of meteorological, hydrological and related activities within their respective regions mentioned in the table below:

North and Central America & the Caribbean    Europe    Africa  
South America    South West Pacific    Asia

## WMO Members

The WMO has 193 Member States and 6 Member Territories.

## WMO Publications/Reports

### Latest WMO Report

**In a report released in May 2023, WMO predicts a more than 50% chance of global temperatures surpassing 1.5°C within five years, highlighting insufficient progress in reducing greenhouse gas emissions and the influence of El Niño. Read more on the WMO report [here](#).**

The World Meteorological Organisation publishes an annual report on the status of the World Climate. This report will provide detailed information on temperatures at the local, national and global levels along with extreme weather events.

- The WMO report also provides information on long term climate change indicators. These indicators include the rise in sea levels, the extent of sea ice and concentrations of greenhouse gases in the atmosphere.
- Other reports published by the WMO are:
  - Status of World Climate
  - Greenhouse Gas Bulletin

## World Meteorological Organisation (WMO) Functions

Functions of the World Meteorological Organisation can be stated as:

1. Coordinating activities of National Meteorological and Hydrological Services in the member countries.
  - These activities are important since they provide basic climate, weather and water services to the population in need whenever they need it.
2. Providing a guarantee of publishing the statistics and observation of Meteorology and Hydrology.
  - This data is further implemented in various aspects like agriculture and water management, shipping, aviation, etc.
3. The WMO also encourages R&D in Meteorology and Hydrology.
  - This is beneficial for reducing different weather impacts and hazards due to climate.

- This can be achieved by maintaining a consistent and reliable forecast.
  - A reliable forecast is necessary for early warning systems on storms like cyclones, tornadoes, and other extreme events like flooding and droughts.
4. Predicting the [locust swarms](#) and transport of various pollutants is another responsibility of the WMO.
- Pollutants like volcanic ash, toxic nuclear substances are all hazardous to human health. If their transport is detected early, various health hazards can be avoided.

## WMO Recent Findings

The World Meteorological Organisation has said that [greenhouse gases](#) in the atmosphere hit a new record in 2018.

- The concentration of carbon dioxide surged from 405.5 ppm in 2017 to 407.8 ppm in 2018, exceeding the average annual increase of 2.06 ppm in 2005-2015.
- WMO's Greenhouse Gas Bulletin measures the atmospheric concentration of the gases responsible for global warming, rather than emissions.
- The report said that since 1990, there has been a 43% increase in total radiative forcing – the warming effect on the climate – due to trapped greenhouse gases. Of this, carbon dioxide accounts for about 80%.
- The annual increase in methane was the highest since 1998, said the report.
- This continuing long-term trend means that future generations will be confronted with increasingly severe impacts of climate change, including rising temperatures, more extreme weather, water stress, sea-level rise and disruption to marine and land ecosystems.

## World Meteorological Organisation and India

India is a member of the WMO since 1950. India's permanent representative to the organisation is the head (DGM - Director-General of Meteorology) of the IMD.

The WMO has applauded India's IMD's remarkable accuracy in the forecasts and updates on [Cyclone Amphan](#), which led to a significant saving of lives in India. The IMD's predictions help in early preparedness for cyclones not only in India but also in other countries, like Bangladesh, Singapore and Bahrain.

The WMO had written a letter to the IMD appreciating its work with respect to predictions of cyclone genesis, intensity, track, landfall time and point, including related adverse weather conditions like rainfall wind, storm surge, etc. with a lead period of over three days.