IMD Forecasts

Why in news?

The India Meteorological Department (IMD) has forecast a 'normal' monsoon for this year, or 99% of the Long Period Average (LPA) of 87 cm.

What is IMD?

- India Meteorological Department established in 1875, is the National Meteorological Service of the country and the principal government agency in all matters relating to meteorology and allied subjects.
- IMD is under the Ministry of Earth Sciences (MoES).
- The headquarters of IMD was initilly in Calcutta but later shifted to Shimla, then to Pune and finally to New Delhi.
- **Objectives**
    - To take meteorological observations and to provide meteorological information for optimum operation of weather-sensitive activities
    - To warn against severe weather phenomena like tropical cyclones, norwesters, duststorms, heavy rains and snow, cold and heat waves, etc.,
    - To provide meteorological statistics required for agriculture, water resource management, industries, oil exploration and other nation-building activities.
    - To conduct and promote research in meteorology and allied disciplines.
- The IMD has a multi-stage monsoon forecast system.

What is the current forecast about?

- The April forecast is a general indicator and usually has little detail on rain expected during each of the monsoon months, and about its geographical distribution.
- The IMD usually shares this in late May or early June, just around the time the monsoon is imminent over Kerala.
- **El Nino**- El Nino is a climate pattern that describes the unusual warming of surface waters in the eastern equatorial Pacific Ocean.
- A normal monsoon forecast this year is predicated on the absence of an El Nino.
- **Indian Ocean Dipole**- Sustained changes in the difference between sea surface temperatures of the tropical western and eastern Indian Ocean is known as the Indian Ocean Dipole.
- During positive event, a sea surface temperature in the western Indian Ocean is warmer relative to the east bringing rainfall to India.
- The Indian Ocean Dipole has been forecasted to be 'neutral' by the IMD which seems unhelpful for the monsoon.
- **Definition of the LPA-** Long Period Average (LPA) is an indication of the average rainfall over a 50 year interval.
- As per the norms of the World Meteorological Organization(WMO) to which India is a signatory, LPA should be updated every 10 years.
- The LPA was 89 cm (the average monsoon rain from 1951-2000) until 2018, and it was

updated to 88 cm (to reflect the average from 1961-2010) and now, the number is 87 cm (to count for the 1971-2020 interval).

The WMO is an intergovernmental organization that originated from the International Meteorological Organization (IMO). It was established in 1950 and later became the specialised agency of the United Nations. It is headquartered in Geneva with World Meteorological Congress as the supreme body.

What does the change in LPA indicate?

- While on the surface, it might look like India is losing just a centimetre of rainfall every decade, it must be remembered that this conceals wide shifts in rainfall when computed at the State and district levels as the monsoon rain is highly uneven.
- The IMD explains the loss of a centimetre every decade as part of a natural cycle of the monsoon where 30 years of less rain, or a 'dry' epoch, is followed by 30 years of a 'wet epoch'.
- India began a dry epoch in the 1970-80 decade and it is now in a neutral phase and will enter a wet epoch in 2030-2040.

References

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