1. Monsoon finally hits Kerala coast after week's delay, says IMD
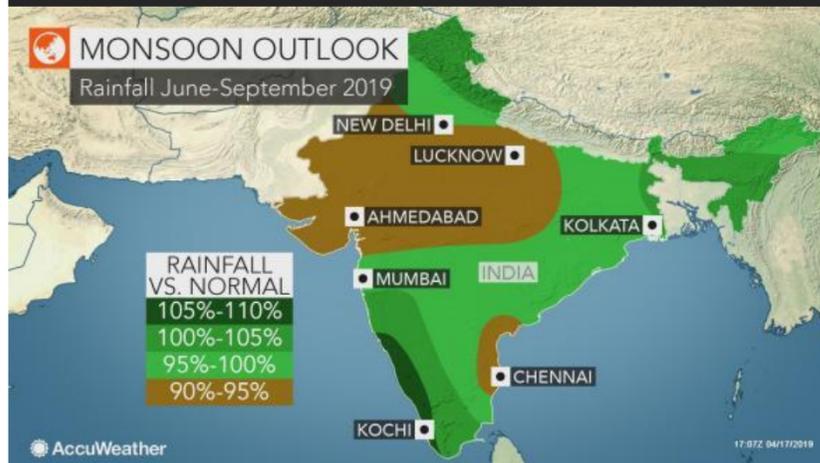

MONSOON OUTLOOK
Rainfall June-September 2019

RAINFALL VS. NORMAL
105%-110%
100%-105%
95%-100%
90%-95%

❑ **What factors do affect the formation and onset of monsoon?**

❑ **How do IMD categorizes the rainfall in India?**

❑ **How accurate are weather forecasters?**

GS paper 1 (Indian Geography)

In this video, you can find detailed answers for all the above questions.

What is the context about?

The India Meteorological Department (IMD) on Saturday said that Monsoon has finally hit the Kerala coast after a week's delay, marking the official commencement of the four-month rainfall season in India.

The arrival of monsoon season will also help alleviate the rampant agricultural distress across the country, especially in dry regions situated across northern parts of the country.

The country is likely to receive normal monsoon. Northwest India, too, is likely to have normal monsoon.

MONSOON OUTLOOK
Rainfall June-September 2019

NEW DELHI
LUCKNOW
AHMEDABAD
KOLKATA
RAINFALL VS. NORMAL
MUMBAI
INDIA
105%-110%
100%-105%
95%-100%
90%-95%
CHENNAI
KOCHI
AccuWeather
17:07Z 04/17/2019

What factors do affect the formation and onset of monsoon?

Factors affecting the formation: Differential heating of land and water creating low pressure over Tibetan Plateau and high pressure over South Indian ocean east of Madagascar

Factors affecting the onset:

❑ Shifting of Inter-Tropical convergence zone (ITCZ) (5 degree N-S) over peninsular India with apparent movement of sun north during summers.

❑ Tropical Westerly Jet Stream blowing north of Himalayas and Tropical Easterly Jet Stream over Northern Plains of India creating monsoon trough and stirring the depression

❑ SE trade winds blowing from sea after crossing equator get deflected right due to coriolis force blowing as SW Monsoon.

How do IMD categorizes the rainfall in India?

IMD forecasts the category of rainfall, be it for country, region or month, the forecast is based on these standardised figures calculated for a period of 50 years. As per the outputs obtained from the weather models, the rainfall is categorised as normal, below normal, or above normal.

- ✓ **Normal or Near Normal:** When per cent departure of actual rainfall is +/-10% of LPA, that is, between 96-104% of LPA.
- ✓ **Below normal:** When departure of actual rainfall is less than 10% of LPA, that is 90-96% of LPA
- ✓ **Above normal:** When actual rainfall is 104-110% of LPA
- ✓ **Deficient:** When departure of actual rainfall is less than 90% of LPA
- ✓ **Excess:** When departure of actual rainfall is more

How accurate are weather forecasters?

MONSOON OUTLOOK
Rainfall June-September 2019

IMD's forecast for 2019 directly challenges the prediction of India's only private sector weather forecaster, Skymet, which is slightly more pessimistic with a forecast of 93%.

Both the IMD and Skymet have hit the bull's eye an equal number of times in the last six years. IMD was off the mark in 2014, 2015 (which turned out to be drought years) and 2018, which narrowly escaped a drought.

2018 was the second below-normal monsoon year in a row. However, rains were better distributed than in 2017, with north India, for once, getting satisfactory rainfall.
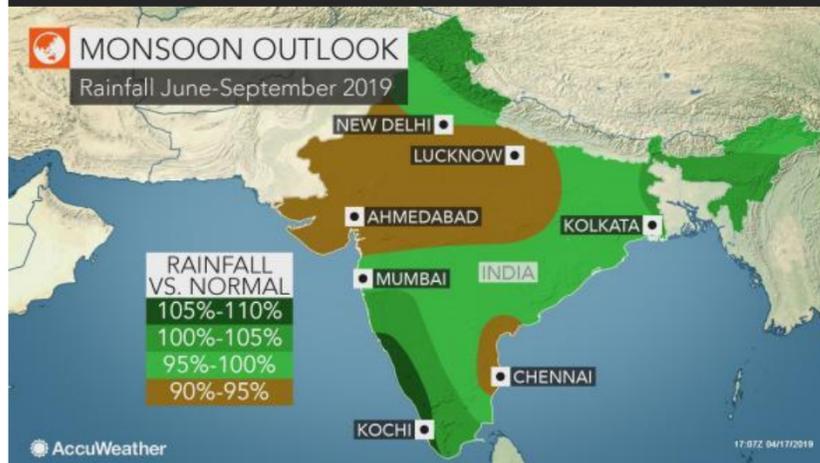
IMD said El Nino conditions are prevailing over the equator, but expects the same to weaken throughout the monsoon season, which lasts between June and September.

This will lead to the possibility of a normal monsoon. These rains are a crucial source of water supply for agriculture. Nearly 75 percent of India's annual rainfall occurs during these four months.