

## **The IMD can further improve its models to forecast shortfall as well as excess rains**

The southwest monsoon has officially ended in India with 87.4 cm of rainfall between June and September, or just 0.7% short of the historical average of 88 cm. In many ways this was an exceptional year.

By August end, India was staring at an all India monsoon rainfall deficit of nearly 9%. This was primarily due to monsoon rain in August, usually the second rainiest month, being short by 24%. Early in the monsoon, the India Meteorological Department (IMD) had forecast “normal” rains with “a tendency towards the positive side” and the August failure had it backtrack a little. It forecast — correctly in hindsight — strong rains in September but maintained that the overall monsoon rainfall while still “normal” would be towards the lower end. However, September rainfall — 35% more than the monthly normal — was so munificent that it completely closed the deficit and was well beyond the IMD’s expectations. Normally, India gets about 17 cm of rain in September, but at 22.9 cm this year, it was more than the 19 cm in August.

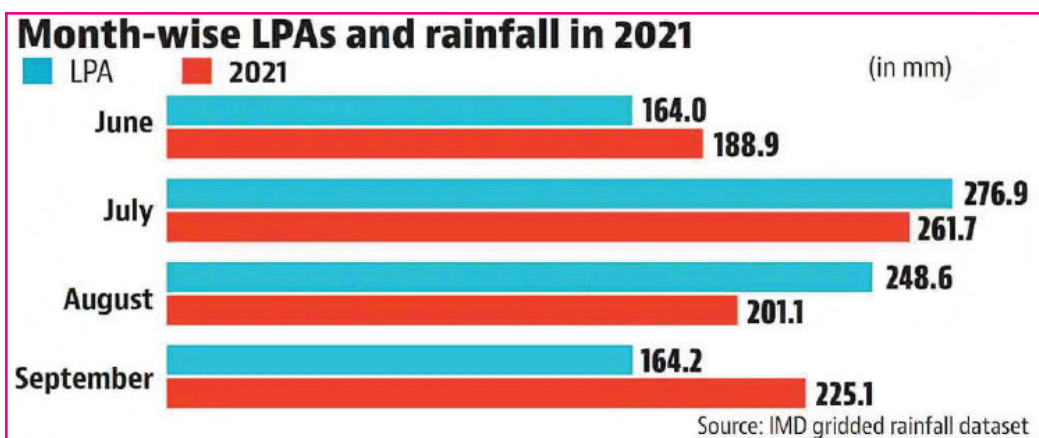
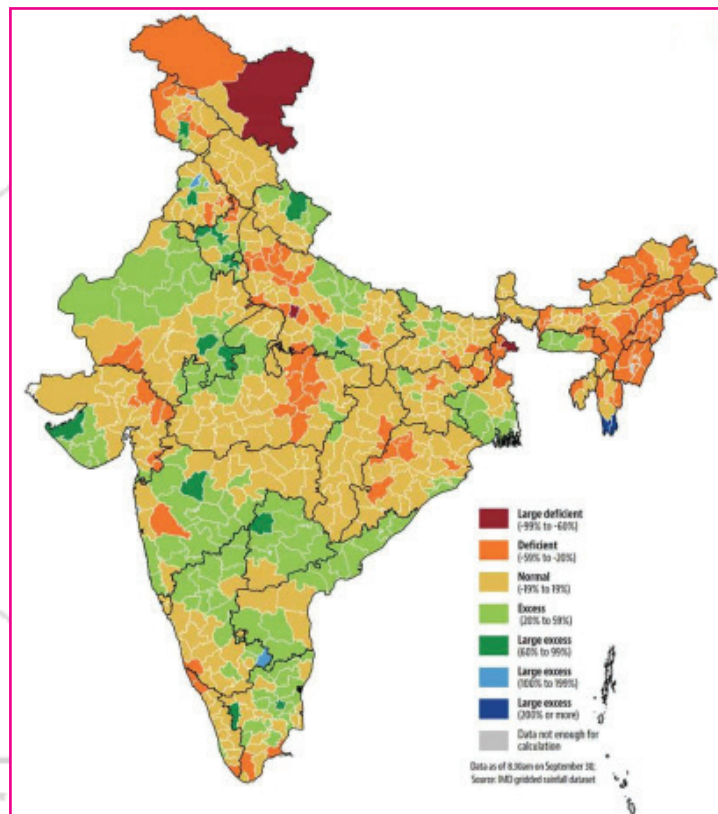
Monsoon 2021 capped a rare three years of healthy rain. In 2020, India received 109% of the long period average (LPA) and in 2019, 110% of the LPA and not since 1996, 1997 and 1998 has India got three consecutive years of normal or above normal rain. Much of the rain was focused on southern India, with large parts of northeast and eastern India receiving below normal rainfall, but this is not concerning for two reasons: the base level of monsoon rains is higher in the northeastern regions than the rest of India and the region also gets the retreating monsoon which normally commences by October end.

Three years of good rains have boosted storage in India’s key reservoirs. The monsoon, however, proved erratic for agriculture. The two key months for kharif crop sowing, July and August, were the ones when the monsoon failed and the excess September rains meant there are real fears of crop damage due to excessive moisture.

The Government is expecting record crop output with kharif crops expected to yield 150.5 million tonnes until June 2022, which is slightly higher than the 149.56 million tonnes harvested last year. There are record surpluses expected for rice, pulses and oilseeds.

While this could advantage exports it might also mean demands by farmers for more remunerative prices. These excess rains may be a rare event but the Government should capitalise on it and ensure adequate stocks for next year.

The IMD should not be content that it got its overall prediction right but must analyse how its models could be improved to forecast shortfall as well as excess rains.



## Expected Questions (Prelims Exams)

- Q. Which of the following statements are true regarding the monsoon of the year 2021?
- (a) 87.4 cm of rain fell between June and September.
  - (b) This year the maximum rainfall occurred in September.
  - (c) The rainfall in the month of August was 24% less than normal.
  - (d) All of the above

## Expected Questions (Mains Exams)

- Q. "The Indian Meteorological Department needs to further improve its model to predict rainfall deficit or excess rainfall." Do Comment. (250 Words)

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**Note: - The question of the main examination given for practice is designed keeping in mind the upcoming UPSC main examination. Therefore, to get an answer to this question, you can take the help of this source as well as other sources related to this topic.**