

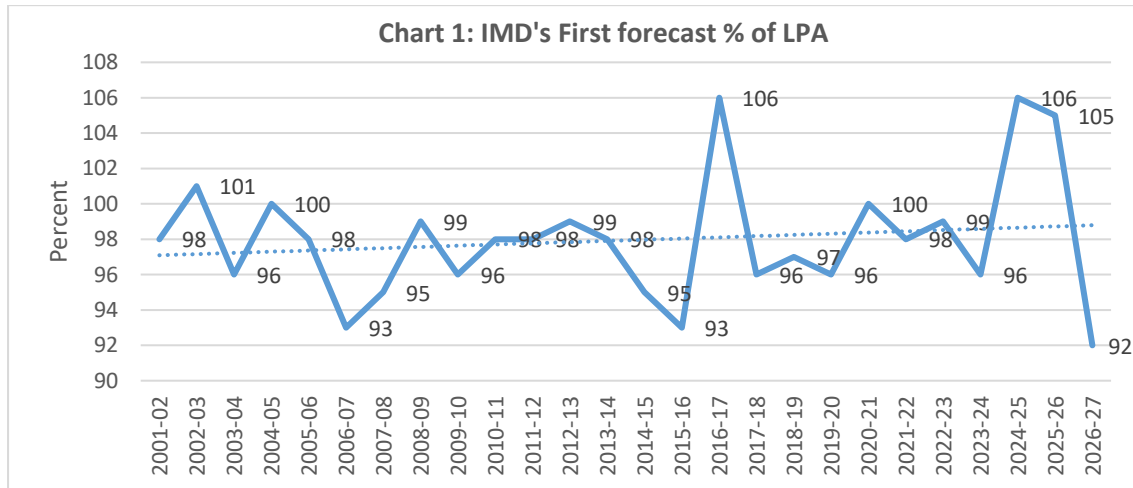
18 Apr 2026

What to make of IMD's first monsoon forecast?

The IMD had come up with an initial monsoon forecast of 92% of LPA for this year. While a very preliminary forecast, it comes on the back of Skymet forecasting monsoon to be 94% of normal. A normal monsoon is defined as being between 96% and 105% of long period average. Hence the initial expectation is of a sub-normal monsoon with the probability of El Nino affecting the rainfall pattern being relatively significant. In this context, the importance of the monsoon for the kharif crop can be looked at in the context of the last 10-20 years.

IMD's first forecast over the years

The first forecast of the IMD has been plotted in the graph below (Chart 1) which gives the numbers since 2001-02. As can be seen the forecasts have tended to be closer to or higher than normal in most of the years. The normal rainfall as per the average is around 87 cms which means that 92% would work out to 80 cms this year. In fact, this is the lowest forecast made by the IMD during this period. There would however be a more refined forecast closer to the start of the monsoon by the end of May and this must be considered as a very preliminary prediction.

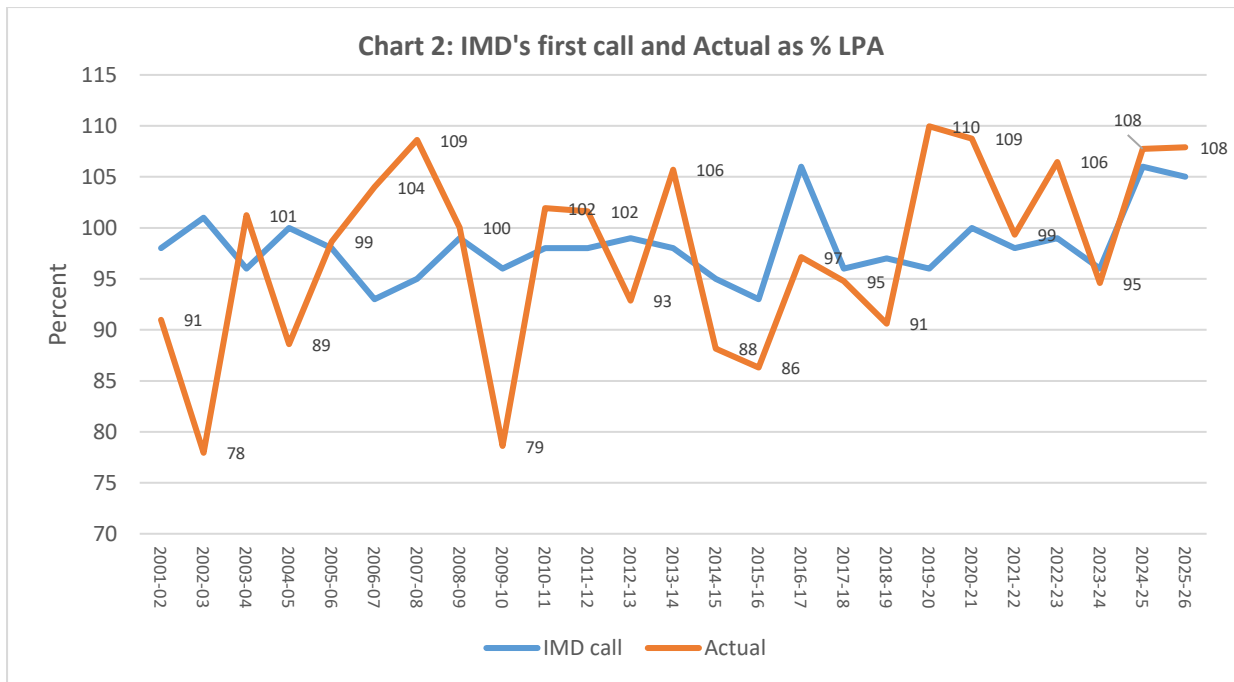


Source: IMD

How have these forecasts mapped with the actual rainfall?

The chart below (Chart 2) maps the first forecast of the IMD with the actual rainfall (both expressed as a percentage of long period average). There has been considerable variation between the two. The coefficient of correlation between the two is 0.19. This does mean that a lower prediction in April may not necessarily result in lower rainfall by the end of the season. Interestingly in 11 of the 25 years, the actual rainfall was lower than projected while it was higher in 14 years. During this period, there were only 2 occasions when the initial prediction was a sub-normal monsoon: 2006-07 and 2015-16. In 2006-07, the actual rainfall turned out to be much higher at 104% while in 2015-16, it was lower at 86%. Forecasting the rains well before the onset of the season is always challenging as given the different climatic influences, the variations in pattern of temperature and winds tend to be quite erratic.

The average deviation between first forecast and actual rainfall was 9.1% for the 25 years period. However, the prediction levels were better in the last 5 years with the average being 2.4%.



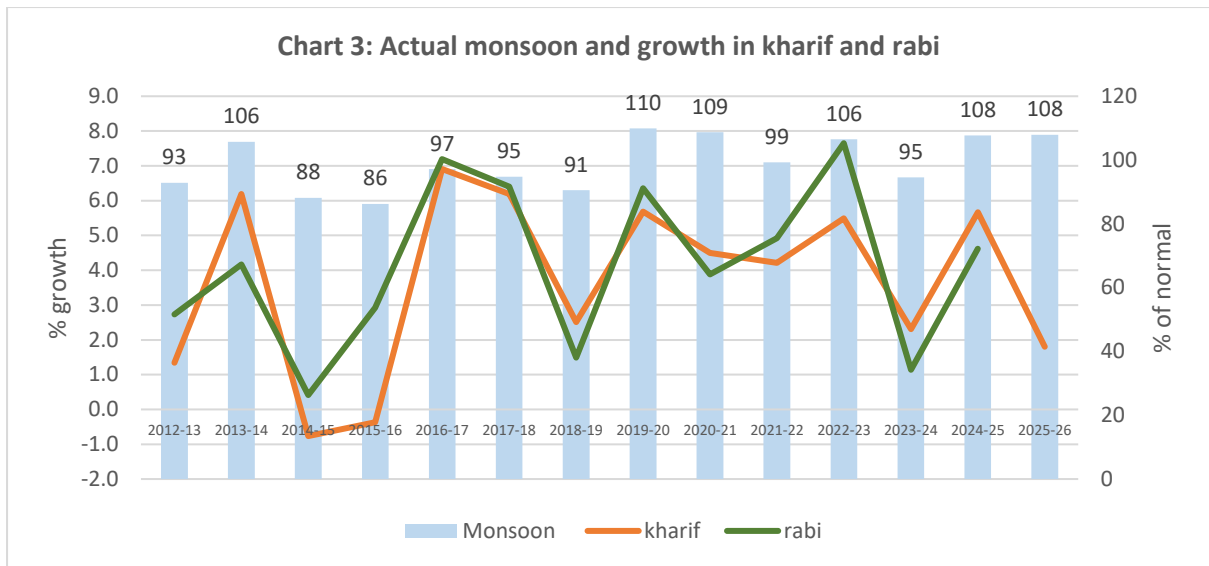
Source: IMD

Just how important are the rains for agricultural production?

Given the limited spread of irrigation in the country which ranged from 50-60% in the last 5 years or so, rains are important for the prospects of several crops especially for those which are grown in the interiors. Besides having an influence on crop output, rains are also important for 'allied activities of agriculture'. Further, the monsoon also determines the level of reservoirs which provide supplies of water for the rest of the year.

Chart 3 maps the actual rainfall as measured as percentage of normal with growth in agricultural output in the kharif and rabi seasons. Given that rains affect not just agriculture but all activities including cropping and allied activities, the two quarters i.e. July-September and October-December are taken to cover the kharif outcomes. The two quarters Jan-Mar and April-June are taken to include rabi production in both agriculture and allied activities. This measure hence also covers non-crops like horticulture, tobacco, rubber etc. which do not get covered in the traditional classification of major crops. Growth of value addition in agriculture in these two is reckoned over last 12 years starting 2012-13 (this was the first year of data when base was indexed to 2011-12 for GDP growth calculations).

The chart shows that sub-normal monsoon i.e. less than 96% of LPA has been associated with lower growth rates in agriculture. In 2014-15 and 2015-16 when monsoon was less than 90% of normal, kharif production had declined. But in these years, rabi production was positive and significant. In general the correlation between rabi and kharif growth rates was high at 0.82. the coefficient was also high for both kharif and rabi with actual monsoon performance at 0.64 for kharif and 0.59 with rabi. This is indicative of the fact that kharif tends to be more dependent on monsoon level than rabi.



Source: IMD and MoSPI

Concluding remarks

The IMD’s first forecast is a preliminary one and we need to wait for the revised one towards the end of May. The first forecast need not necessarily be indicative of the final monsoon outcome. There have been variations between these forecasts and actual rainfall in the past. In the last few years, however, the deviation between the actual and forecasts have tended to narrow down indicating better predictions.

Total rainfall has a close relation with both kharif and rabi output and hence will have an impact on overall growth in farm income and hence rural consumption. A good supply of water is a necessary condition for a good harvest although this year, due to the disruptions caused in supply of gas due to the war, other inputs that go into agriculture like availability and cost of fertilizers and pesticides will also have a bearing on the final outcome.

Disclaimer

The views expressed in this research note are personal views of the author(s) and do not necessarily reflect the views of Bank of Baroda. Nothing contained in this publication shall constitute or be deemed to constitute an offer to sell/ purchase or as an invitation or solicitation to do so for any securities of any entity. Bank of Baroda and/ or its Affiliates and its subsidiaries make no representation as to the accuracy; completeness or reliability of any information contained herein or otherwise provided and hereby disclaim any liability with regard to the same. Bank of Baroda Group or its officers, employees, personnel, directors may be associated in a commercial or personal capacity or may have a commercial interest including as proprietary traders in or with the securities and/ or companies or issues or matters as contained in this publication and such commercial capacity or interest whether or not differing with or conflicting with this publication, shall not make or render Bank of Baroda Group liable in any manner whatsoever & Bank of Baroda Group or any of its officers, employees, personnel, directors shall not be liable for any loss, damage, liability whatsoever for any direct or indirect loss arising from the use or access of any information that may be displayed in this publication from time to time.

Visit us at www.bankofbaroda.com



For further details about this publication, please contact:

Economics Research Department
 Bank of Baroda
chief.economist@bankofbaroda.com