Super El Niño

India's Compound-Risk Stress Test



Image: Magnific

The weakest monsoon in more than a decade has collided with a record-breaking El Niño and a fertilizer shock from the Middle East. India will not run out of grain, but it now faces a test of prices, water, rural incomes and policy credibility. How it responds will decide whether this becomes a passing drought or the start of long-overdue reform.

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India still depends heavily on four months of rain. The south-west monsoon delivers about three-quarters of its annual rainfall, refills reservoirs and aquifers, and decides the kharif harvest. In 2026 it fell short. The India Meteorological Department (IMD) recorded 759.4 mm of rain between June and September against a long-period average (LPA) of 868.6 mm, a deficit of 12.6%. That makes this the weakest monsoon in more than a decade, the fourth lowest since 2001 and the 13th driest since records began in 1901. The cause lies 15,000 km away. On September 21, the daily sea-surface temperature anomaly in the Niño 3.4 region of the equatorial Pacific reached 3.11 °C, breaking the record set in November 2015. The US Climate Prediction Center (October 8) puts an 83% probability on the event exceeding +2.5 °C in October-December, which would make it stronger than any El Niño since 1950. It also expects strong-to-very-strong conditions to last through January-March 2027. The World Meteorological Organization avoids the label "super El Niño" because it is not an official category. The scale of the event explains why the label has stuck anyway.

What sets 2026 apart from 2009 or 2015 is the company this El Niño keeps. It has arrived alongside conflict in Middle East that has repeatedly disrupted shipping through the Strait of Hormuz. That has pushed India's crude basket to $116 a barrel in September and doubled the landed cost of some fertilizers. Continued disruption around the Black Sea has helped lift the FAO cereal price index 17.2% year-on-year. At home, inflation has turned upward and the Reserve Bank of India (RBI) has raised its policy rate for the first time since February 2023. A rainfall shock that India has absorbed many times before is now one of several shocks hitting at once. That is what makes this year a compound-risk stress test.

Anatomy of a failed monsoon

The national average hides how unevenly and erratically the rain fell (Infographic 1). The monsoon arrived late, on June 4, and June rainfall was 35% below normal, which delayed sowing. July briefly recovered to normal. Then August brought a 16% shortfall during the flowering and grain-filling stages, together with the hottest August since 1901. September's rains came too late to help most standing crops. The deficit was also concentrated by region. Central India (97% of LPA) and the

north-west (94%) came through broadly intact. The south peninsula received only 76% of its normal rain and the east and north-east 74%. Seventeen of 36 meteorological subdivisions were deficient. Rayalaseema in Andhra Pradesh was 43% short, Marathwada about 40% and Karnataka 35%, its worst monsoon in 55 years. For many people in the Deccan, this is the driest year they can remember.

From rain gauge to reservoir and field

A rainfall deficit turns into drought when it reaches soils, aquifers and reservoirs, and in 2026 it did so quickly. IIT Gandhinagar's India Drought Monitor shows the share of the country under dry or drought conditions rising from 38.9% in mid-August to 52.5% by September 16. By the end of the season it was about 70%. State declarations confirm the picture. Karnataka has notified 217 of its 240 taluks, Maharashtra 265 of 358 talukas, and Andhra Pradesh 388 mandals across 21 of its 28 districts. Telangana and Rajasthan are still assessing. Drought conditions have also persisted in Punjab and Haryana. There tube wells make up for the rain, but 110 of Punjab's 153 groundwater blocks are already over-exploited, so the cost shows up in falling aquifers rather than failed crops. Reservoirs link this year's drought to next season's harvest. Nomura estimates that India's reservoirs were about 28% short of full capacity at the end of September. Central Water Commission data shows that the 178 monitored reservoirs are at roughly 70% of their live storage, against 79% a year earlier. In the south, storage is about 50% of capacity compared with 87% last year (Infographic 2). Rabi crops such as wheat, chana and mustard depend on stored water and residual soil moisture, so these figures matter more for the winter harvest than the rainfall data do. The kharif damage is already visible. By mid-September the sown area was about 16 lakh hectares below last year, with paddy accounting for almost all of the gap. Paddy area fell most in Karnataka, Telangana and Andhra Pradesh. The government has since cut its 2026-27 foodgrain target to 373.9 million tons, below the 376.6 million tons produced in 2025-26, while describing the problem as regional rather than national.

Why this El Niño is different

Timing: Most El Niños mainly damage the kharif crop. This one is expected to peak between November and January and persist into February-March, which overlaps with the rabi season. IMD expects below-normal winter rain and above-normal temperatures across much of the country, and early model runs point to a hot spring in 2027. Wheat is highly sensitive to heat during grain filling. The March 2022 heatwave cut yields enough to prompt an export ban.

> What sets the El Niño of 2026 apart, from that of 2009 or 2015, is the fact that it has arrived alongside conflict in the Middle East that has repeatedly disrupted shipping through the Strait of Hormuz, which in turn has pushed India's crude basket to $116 a barrel in September and doubled the landed cost of some fertilizers



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A warmer baseline: El Niño now occurs in a world that is about 1.3 °C warmer, so the same rainfall deficit dries soils faster and adds more heat stress than it did a generation ago.

Fertilizer exposure: India produces about 87% of its urea but imports roughly a third of its complex fertilizers, mainly DAP, along with most of the ammonia and phosphoric acid used to make them. More than 40% of its urea and phosphatic imports come from Middle East. India's April urea tender drew offers of $935-1,136 a ton, compared with $400-450 in January. Global DAP prices rose from about $625 to $865. The budgeted fertilizer subsidy of ₹1.70 tn now looks likely to exceed ₹2 tn. Supply is a bigger problem than price. One district in Haryana that needs about 45,000 tons of DAP for the rabi season received a first consignment of 2,300 tons. Rabi sowing, which uses the most DAP, is happening now.

Risk to the 2027 monsoon: Very strong El Niños sometimes decay slowly. If warm Pacific conditions linger into mid-2027 and the Indian Ocean Dipole offers no offset, a second weak monsoon cannot be ruled out. That is not the base case, but planners should prepare for it.

What history tells us

History offers some reassurance and some warning. Infographic 3 compares monsoon deficits with changes in foodgrain output in recent El Niño-linked droughts. In 2002 a 19% rainfall shortfall cut foodgrain output by almost 18%. In 2009 a larger 22% deficit cut it by only 7%. In 2014 output fell about 5%, in 2015 it was flat, and in 2023 it rose slightly. Irrigation, groundwater, better seeds and assured procurement have steadily weakened the link between rainfall and the grain harvest. The buffer is also unusually large. On September 1, the Food Corporation of India held about 870 lakh tons of wheat and rice, roughly 2.8 times the stocking norm. India can feed its people. A repeat of 1966, or even 2002, is not on the cards.

The warning is that the risk has shifted rather than disappeared. It has moved from cereals to the rest of the diet: pulses, oilseeds, vegetables, sugar, milk and fodder, where buffers are thin or absent. Onion prices rose 108% year-on-year in September. It has moved from production to prices and incomes, and from rainfall to groundwater, so the damage builds up in depleted aquifers. And it has moved from the national level to particular regions and households. National totals can look accept-

able while a smallholder in Anantapur or Beed loses an entire season's income.

Three scenarios for 2026-27

To estimate the possible impact, I build three scenarios (Infographic 4). They scale the kharif impact from the rainfall-to-output relationship seen in 2009 and 2014, and link rabi outcomes to reservoir storage, winter heat and fertilizer supply. The ranges are indicative, not forecasts.

1. **Scenario A, contained stress (about 45% likely):** The north-east monsoon brings normal rain to the south and there is no new energy shock. Output falls 2-4% and inflation stays close to the RBI's path, though the worst drought districts still go through a serious crisis.
2. **Scenario B, dry rabi (about 40%):** The north-east monsoon fails in the south and a warm February-March cuts wheat yields. Food inflation reaches double digits and headline CPI moves towards the 6% ceiling, forcing further rate rises just as rural demand weakens.
3. **Scenario C, compound cascade (about 15%):** Renewed closure of Hormuz, fertilizer rationing during sowing, a severe 2027 heatwave and a late monsoon all add to Scenario B. Output falls by up to 12% and growth by more than a percentage point. This is the scenario in which an agrarian crisis becomes a macroeconomic one.

Decision-makers should watch four signposts: north-east monsoon rainfall over Tamil Nadu, Andhra Pradesh and Karnataka through December; DAP and NPK sales against requirement in November; weekly reservoir bulletins; and maximum temperatures in the wheat belt in February.

How the shock spreads through the economy

The agrarian shock arrives in an economy that is growing fast but has little room to absorb rising prices. September CPI inflation rose to 5.54% and food inflation to 7.74%. Rural inflation, at 6.08%, has already breached the RBI's upper tolerance limit, so the poorest households bear the heaviest burden. On October 7, the RBI raised the repo rate to 5.50% and shifted its stance to "calibrated tightening". It projects inflation to peak around 6% in October-December and has explicitly cited the deficient monsoon and El Niño as risks. Headline growth remains strong, with the RBI projecting 7.1% for FY27, but it rests mainly on urban, services and infrastructure activity. Rural consumption is the weak point.

The headline unemployment rate has stayed near 5%, which says little about what is happening in rural India. Drought shows up first as fewer days of farm work, falling wages for agricultural laborers, distress sales of cattle, rising informal debt and migration to cities. Nutrition is the slowest and most damaging channel. According to the UN's SOFI 2026 report, India has 142.5 million undernourished people, and 53.7% of women of reproductive age are anaemic. When pulse and vegetable prices rise faster than cereal prices, children in protein-poor households suffer lasting harm. The fiscal bill for subsidies and relief rises just as oil prices squeeze public finances.

The Super El Niño Story So Far

87.4%: Monsoon rainfall as a share of the long-period average; the 4th lowest season since 2001 and 13th driest since 1901.

~28%: How far India's reservoirs stood below full capacity at end-September (Nomura). Southern storage is at about half of capacity.

5.54% / 7.74%: Headline and food inflation in September 2026. Headline inflation has now risen for six months in a row.

+3.11 °C: The record daily Niño 3.4 anomaly set on September 21, surpassing the 2015 peak. The event is expected to last into early 2027.

2.8x: Central wheat and rice stocks relative to the buffer norm. This is India's main shock absorber.

My overall assessment

Is this India's worst water and farm crisis ever? At the national level, no. The 2002 and 2009 droughts were deeper, and grain reserves have never been this large. For the southern peninsula and Marathwada, however, the description fits. And no recent drought has combined an El Niño lasting into the rabi season, a disrupted fertilizer supply, oil above $110 and a central bank that is raising rates. The most accurate description is not a famine risk but a crisis of prices, incomes and water, concentrated in particular regions and dangerous because the national totals may encourage complacency. The policy mistake to avoid is to point to full granaries and assume the problem is under control.

What to do in the next 120 days

Protect the rabi crop: Switch water-short districts from wheat to chana, mustard and millets, distribute heat-tolerant seed and fast-track insurance claims.

Secure fertilizer: Front-load DAP and NPK imports from sources that avoid Hormuz, such as Saudi Arabia and Morocco, prioritize drought districts and crack down on diversion.

Allocate water to drinking first: Prioritize drinking water in reservoir releases, prepare contingency plans for Bengaluru, Hyderabad and Chennai, and limit pumping hours in critical aquifer blocks.

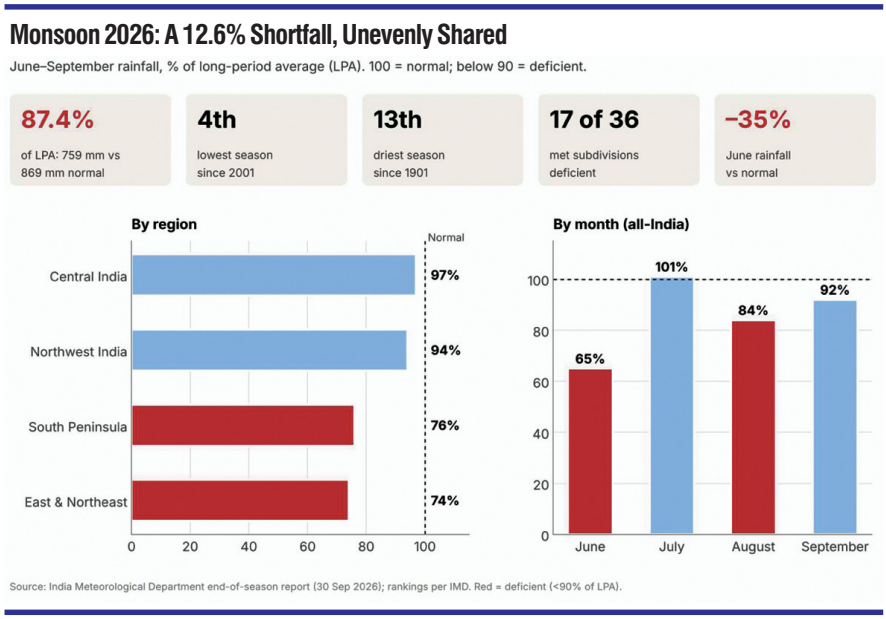
Manage prices without panic: Release grain, onion and pulse buffers and adjust import duties, but avoid sudden export bans that damage India's reputation as a reliable supplier.

Support incomes: Extend MGNREGA/Viksit Bharat G-RAM-G workdays in drought-notified blocks, set up fodder banks and cattle camps, and activate heat-action plans before March 2027.

Long-term policy for lasting resilience

Relief alone does not build resilience. This El Niño should be used to push through structural changes that have been put off for years.

1. **Manage water demand, not just supply:** Free or flat-rate farm power has encouraged the pumping that is draining aquifers in Punjab, Haryana and the Deccan. Separate feeders for farm power, direct benefit transfers in place of free power,



and community groundwater budgeting along the lines of Atal Bhujal Yojana should become national norms. Micro-irrigation should be scaled up across water-stressed basins.

2. **Make incentives crop-neutral.**: Procurement and pricing policy still favor water-intensive paddy in the north-west and sugarcane in Marathwada. Per-hectare payments for switching to pulses, oilseeds and millets, backed by assured procurement for those crops, would match what farmers grow to how much water is available.
3. **Build fertilizer security:** Steps include a strategic fertilizer reserve similar to the strategic petroleum reserve, equity stakes and long-term offtake agreements in phosphate- and potash-rich countries, green ammonia produced under the National Green Hydrogen Mission for domestic urea, and a nutrient-based subsidy that discourages urea overuse and rewards soil health.
4. **Finance climate risk before disasters happen:** Parametric insurance for farmers and states, sovereign catastrophe bonds and contingent credit lines would make payouts automatic. Crop insurance needs faster claim settlement based on satellite and drone data. The RBI's climate stress tests for banks should also cover concentrated exposure to agricultural credit.
5. **Act on forecasts:** Seasonal forecasts should trigger pre-approved actions automatically, including cash transfers, seed distribution and water rationing. Real-time drought indices should be built into the drought manual so that declarations follow the data rather than politics.
6. **Build adaptive social protection:** Safety nets should expand automatically when drought indices cross set thresholds. The public distribution system should also supply pulses and millets, and nutrition support should reach women and young children first.
7. **Govern climate risk as macroeconomic risk:** A standing National Climate Risk Council, bringing together IMD, the agriculture, water, finance and petroleum ministries and the RBI, would treat El Niño the way central banks treat a financial shock, with scenarios, triggers and coordinated responses.

A note for business leaders

For companies, this El Niño affects operations and strategy. Rural demand, raw-material costs (sugar, edible oils, cotton, dairy), water supply to plants in the Deccan and summer power reliability are all exposed. Leaders should build El Niño scenarios into FY27-28 plans and assess water stress across their supply chains. The same pressures create opportunities in micro-irrigation, agri-fintech and insurance, cold chains and water reuse.

What's in store?

India's granaries are full, its forecasters were early and accurate, and its economy is growing strongly. Those are real strengths. But a record El Niño, a disrupted fertilizer supply and a warming climate are now testing systems designed for the risks of the last century. The country is unlikely to go hungry this year. The bigger risk is that it treats a long-term structural problem as a one-off emergency. If the 2026-27 drought leads to lasting reform in how India prices water, supports crops, secures fertilizer and finances climate risk, it will have done some good. If it does not, the next El Niño will be harder to manage.

The fundamental lesson of the emerging 2026-27 Super El Niño is that India's greatest vulnerability is not rainfall deficit alone. It is the interaction between climate change, heat stress, water scarcity, food inflation, health risks, and livelihood insecurity. This is precisely the type of compound climate risk that institutions such as the WMO, FAO, World Bank, and WRI increasingly identify as the defining challenge of climate resilience in the twenty-first century.

A Super El Niño need not become a national crisis. However, without anticipatory action, climate-informed agricultural planning, water demand management, social protection measures, and strengthened public health preparedness, it could emerge as one of the most significant climate-economic shocks India has faced in recent years.

The question is no longer whether climate risks will affect development trajectories. The real question is whether India can convert climate foresight into climate resilience. ■

Reference # 20M-2026-11-02-01