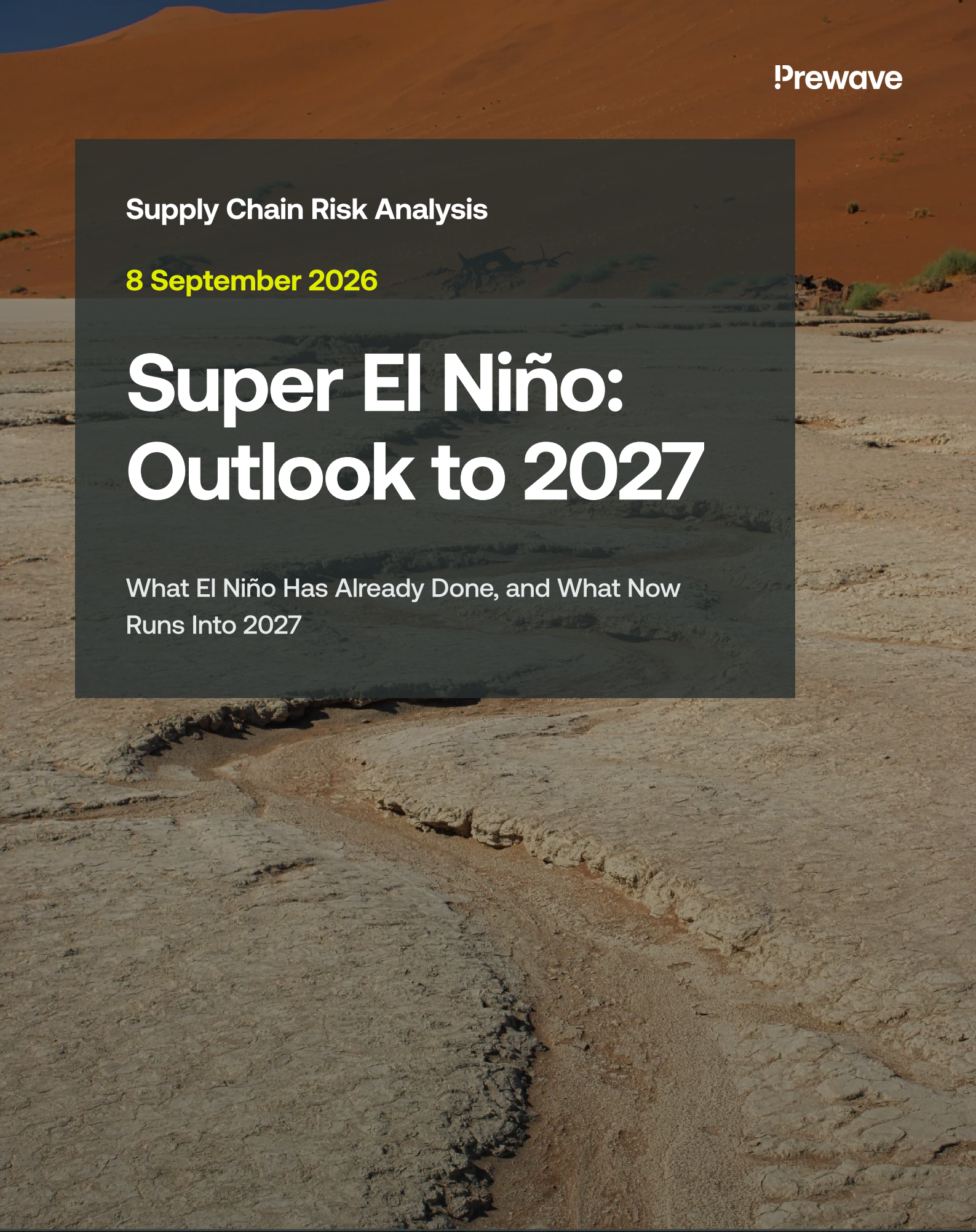

Prewave

Supply Chain Risk Analysis

8 September 2026

Super El Niño: Outlook to 2027

What El Niño Has Already Done, and What Now Runs Into 2027

Risk Level: HIGH

Horizon September 2026 to March 2027

BACKGROUND TO THIS REPORT

On 3 September the WMO placed the likelihood of El Niño persisting through February 2027 at nearly 100%, the first time a WMO El Niño/La Niña Update has been this unequivocal, and forecast further strengthening to very strong intensity [1][2].

Our 5 June outlook was written before the event was confirmed, when the question was still whether it would form at all. It has formed, it is stronger than forecast, and it is now the dominant supply chain weather risk into next year.

1 El Niño, Explained

El Niño is not a storm, a season, or a weather event. It is a change in the state of the Pacific Ocean and the atmosphere sitting on top of it. The strength of the event does not determine the severity of impacts in any single country: effects vary by location and season, and can be reinforced or offset by other drivers in the Indian and Atlantic Oceans [1].

Where does it happen?

El Niño occurs in the central and eastern equatorial Pacific, a band of ocean running roughly from the international date line to the coast of Ecuador and Peru. The reference area is a rectangle called the Niño 3.4 region. Sea surface temperature there, averaged over three months, produces the Oceanic Niño Index, the number by which events are graded [1].

What happens?

Under normal conditions, easterly trade winds blow warm surface water westwards and pile it up in a warm pool east of Indonesia. That warm water drives air upwards, the air travels east at altitude, and it descends again near South America. The loop is called the Walker Circulation. As surface water is being dragged west, cold deep water rises to replace it off South America, a process called upwelling [4].

During El Niño, the trade winds weaken. The warm pool sloshes back eastwards. Upwelling of cold water slows or stops, and the central and eastern Pacific becomes warmer than normal. The zone of rising air and heavy rainfall migrates east with the warm water [4].

Why does that matter if it's thousands of kilometres away?

Moving the tropical Pacific's main engine of convection several thousand kilometres east re-plumbs the atmospheric circulation that depends on it. Rain that would have fallen over Indonesia falls over the open ocean instead. Jet streams shift.

The result is a recognisable and repeating global pattern: drought across Southeast Asia and Australia, a weakened South Asian monsoon, reduced rainfall over the Panama Canal watershed and southern Africa, and heavy rainfall along the Pacific coast of South America [1][4].

How does this impact Europe?

European climate is governed by the North Atlantic Oscillation, and El Niño's influence on the North Atlantic and European sector is weaker, season-dependent and not linear. The same event can produce different European outcomes depending on the month and the background state of the atmosphere [36]. El Niño still matters to European manufacturers, as supply chains reach into the regions where the signal is strong. Section 4 sets out the European picture in full.

How often does this happen?

El Niño typically occurs every two to seven years and lasts nine to twelve months. It generally begins developing between March and June and peaks between November and February. Its effect on global temperature often lands hardest in the year after it develops [1].

Why is the current El Niño so serious?

The seriousness is not the El Niño on its own. It's the arithmetic of adding it to a baseline that is already elevated.

WMO now puts persistence through February 2027 at close to certainty and expects the event to reach very strong intensity before peaking towards the end of this year. That alone would be notable. What makes it serious is that this heat is being loaded into an atmosphere that is already warming rapidly from greenhouse gas emissions, so the event is not moving temperature from a normal starting point. It is stacking on top of a trend.

The second half of the arithmetic is timing. El Niño's effect on global temperature lands hardest in the year after it develops, which means the peak of this event is not something the world has already experienced. It is ahead of us. On current forecasts the combination is expected to blow apart the existing record and make 2027 the hottest year ever recorded.

2 Why the 2026-27 El Niño Is Different

Four things separate the 2026 event from a routine El Niño.

The ocean signal is exceptional, above and below the surface.

The Niño 3.4 index strengthened from +1.5 °C above normal across May to July, to +2.0 °C in July, then to weekly values of roughly +2.2 °C to +2.6 °C between late July and mid-August. Subsurface temperatures were more than 8 °C above average in places during July and early August. Surface and subsurface conditions together support further strengthening [1].

The forecast confidence is unprecedented in WMO's records.

Forecasts from WMO's Global Producing Centres give an exceptionally high likelihood of nearly 100% that El Niño persists through February 2027. WMO states plainly that no previous El Niño/La Niña Update has been so unequivocal, and attributes this to strong agreement across its network [1].

A second climate driver is loading in the same direction.

A positive Indian Ocean Dipole is expected to develop, reaching a seasonal mean of 0.9 °C across September to November. The equatorial Atlantic is forecast to stay warm, with above-normal sea surface temperatures in both the North and South Tropical Atlantic [1]. A positive dipole suppresses rainfall over the Maritime Continent, which is the same direction of travel El Niño already imposes on Indonesia and Malaysia.

The institutional response is without precedent.

WMO Secretary-General Celeste Saulo, on 3 September: "This exceptional El Niño demands exceptional preparation and response." She noted that in WMO's fifty-year history it had never launched a mobilisation on this scale with National Meteorological and Hydrological Services [1]. UN Secretary-General António Guterres put it more bluntly at the same press conference: "El Niño is being supersized before our eyes" [60]. The World Food Programme estimated in August that the event was likely to push around 50 million people into acute hunger [60].

3 El Niño Risks to Look Out For

The table below sets out where this El Niño is already acting on supply chains and where the risk is still forming. The first three rows are covered in detail in the sections that follow; the remainder are on watch and will be tracked in subsequent reports.

RISK TYPE	WHERE	STATUS	WHAT IS HAPPENING
Deep-sea chokepoint **Panama Canal**	Panama	**ACTIVE**	Watershed rainfall 34% below average May to August and inflows 44% below. Draft cut in five steps since July; daily transits capped at 34, falling to 32 from 15 September. Auction slots averaged $1.1m in August, sixteen times the level a year earlier. Covered below [16][19]
Raw materials **Natural rubber**	Thailand, Vietnam, Indonesia, Malaysia	**ACTIVE**	Futures near 240 US cents/kg, close to the highest since 2013. ANRPC has 2026 consumption at 15.36 Mt against production of 15.28 Mt. Peak tapping season ends in September; Q4 dryness reduces latex yields. Covered below [24]
Monsoon and power **India**	India, concentrated in the south	**ACTIVE**	Warmest August since 1901, monsoon deficit 13.8%, Southern Peninsular India 24.2% deficient. Hydropower down nearly 12% year on year through 29 August. Covered below [29] [30]
Deep-sea chokepoint **Vegetable oils and palm oil**	Indonesia, Malaysia	**WATCH** expressing 2027	The two countries account for roughly 90% of global palm oil supply. Yield response to drought stress runs on a six to twenty-four month lag, so the consequences of the 2026 stress window largely express next year. A positive Indian Ocean Dipole reinforces the drying [1][59]
Industrial metals **Copper and Andean mining**	Chile, Peru	**ACTIVE**	El Niño years bring heavy rainfall to the Pacific coast of South America, and more intense flooding is already expected across the region as the event strengthens [60]. Producers have trimmed 2026 copper guidance following storm-related stoppages and grid interruptions at Andean operations [57]

RISK TYPE	WHERE	STATUS	WHAT IS HAPPENING
Wildfire and drought **Direct site risk**	Indonesia, Australia	**ACTIVE** escalating to Q4	El Niño is already worsening wildfires in Indonesia, and fire risk is rising across Australia as the event strengthens into the southern hemisphere summer. Supplier sites, storage facilities and logistics hubs in affected zones carry business interruption exposure with little advance warning [60]
Climate baseline **Global temperature**	Worldwide	**WATCH** 2027	WMO notes El Niño's effect on global temperature often lands hardest in the year after it develops, placing the temperature peak of this event in 2027 rather than 2026 [1]. On current forecasts 2027 is expected to become the hottest year on record by a clear margin [60]

Featured Exposure 1: The Panama Canal

The Panama Canal Authority (ACP) spent the first half of 2026 in a strong position. Gatún Lake sat at historically high levels from late 2025, the canal ran 38 daily transits in May, and in mid-May the ACP stated that water availability supported normal operations through 31 December [17]. That position has reversed over the course of the summer as El Niño strengthened.

Maximum authorised draft at the Neopanamax locks fell from the 15.24 m design maximum to 15.09 m (49.5 ft) on 3 July, to 14.94 m (49 ft) on 24 July, and to around 14.78 m (48.5 ft) from 15 August, with 14.63 m (48 ft) from 2 September and 14.48 m (47.5 ft) now scheduled for 1 October [16][17].

From 4 September, daily transits are capped at 34, falling to 32 from 15 September. Neopanamax lock slots are capped at nine per day, and Panamax slots at 25, falling to 23 from 15 September [16] [18]. Rainfall across the canal watershed ran 34% below the historical average from May through August, and inflows 44% below [19]. The ACP has stated that despite the arrival of Panama's rainy season, low precipitation in the watershed required additional adjustments [16].

On 20 August the ACP postponed the two remaining draft reductions while simultaneously tightening transit caps [16]. Read together, the canal relaxed the lever that costs shippers cargo weight in the same fortnight it tightened the lever that costs them sailings. That is a choice about which constraint does the rationing, and it puts the pressure on schedule rather than on payload [19].

The canal averaged about 35 daily transits through June against a working capacity near 40, so a cap of 34 is near demand [19]. Auction slots for priority passage averaged $1.1 million in August, sixteen times the level a year earlier [19]. Congestion is arriving into a market already tightened by disruption at the Strait of Hormuz, which has pushed buyers towards American supply: US crude oil exports rose 46% year on year to a record 61.6 million tonnes in Q2 2026 according to Kpler [20]. Some gas tankers are already taking the detour around South America [21].

ACP Administrator Ricaurte Vásquez has framed the water problem as a cargo problem: "We are asking them to try to consolidate cargo", explaining that the canal now assesses cargo moved per cubic metre of water as part of its hydrological planning [21]. On the canal's readiness, Vásquez said the 2023 and 2024 experience "has given us the discipline to deal with what we do not know" [22].

Industries affected

Automotive. The most consequential single line in the ACP's revised booking rules is the reallocation hierarchy. Where demand in one vessel segment falls short, unused containership slots are redistributed first to LNG and LPG carriers, and only then to vehicle carriers, RoRos, bulkers and others [21]. Vehicle carriers therefore sit third in the queue for spare capacity at the moment gas carriers are in unusually high demand because of Hormuz. For finished-vehicle flows between Asia and the US East Coast, and for RoRo movements of built-up units and CKD kits, this is a scheduling risk rather than a payload risk: the ships are not carrying less, there are fewer sailings to be had, and the priority auction is the alternative at $1.1 million a slot.

Chemicals and general manufacturing. Every half-foot of lost draft removes cargo intake from Neopanamax tankers and bulkers, forcing partial loading, cargo splitting, or rerouting via Suez or the Cape of Good Hope [23]. The exposed flows are crude and product tankers, LNG and LPG, and dry bulk trading between Asia, the US Gulf and Atlantic, and the Middle East [23]. For manufacturers, this reaches resins, base chemicals, and industrial gases arriving on trans-Pacific routings, and it reaches them as freight cost and lead-time variance rather than as outright unavailability.

Featured Exposure 2: Natural Rubber

Natural rubber is the clearest case in this event of a material with no substitute, produced almost entirely inside the geography that El Niño dries out.

Prices are at multi-year highs. Futures traded around 240 US cents per kilogram in early September, close to the highest level since 2013 [24]. The Association of Natural Rubber Producing Countries has 2026 consumption at 15.36 million tonnes against production of 15.28 million tonnes, a market in deficit for the remainder of the year [24]. Thailand's natural rubber exports, excluding compound rubber, fell 13% year on year in the first half of 2026 to 1.203 million tonnes [25].

The supply mechanism is straightforward and slow to reverse. Southeast Asia's peak tapping season ends in September, which removes supply from the market seasonally. Intermittent rainfall in Thailand, the world's largest producer, has already disrupted tapping. And a strengthening El Niño in Q4 brings hotter, drier conditions that reduce latex yields across the producing regions [24]. Rubber trees are perennials: a stressed season is not recovered by a good month.

The EU neither produces nor processes natural rubber, making European industry 100% import dependent, with Indonesia, Thailand, Côte d'Ivoire and Malaysia supplying around 85% of EU imports [26]. Per ETRMA, "there is no substitute for natural rubber from hevea trees" that could be used across all current applications [26].

Synthetic rubber is not a like-for-like replacement, and in 2026 it is not even a cheap one: crude-linked inputs including synthetic rubber, carbon black and nylon tyre cord have risen alongside natural rubber because of the Middle East conflict [27].

Industries affected

Automotive: tyres first, and the pass-through is already visible in earnings. Natural rubber accounts for between 20% and 40% of the weight of a tyre depending on segment, and the tyre industry absorbs roughly three-quarters of global natural rubber production [26]. The effect on producers is unambiguous: JK Tyre's consolidated EBITDA margin fell to 6.8% from 10.9% a year earlier after its raw material basket rose around 20% sequentially [27]. Since April 2026, more than 80 price adjustment notices have been issued across the industry, with announced increases of 2% to 10% [28].

Automotive: everything that is not a tyre. The exposure that procurement teams routinely miss sits in the non-tyre elastomer bill of materials: rubber seals and gaskets, anti-vibration and engine mounts, hoses, bushings, weatherstripping, boots and diaphragms. These are low-value, high-count parts, frequently single-sourced, frequently held at low inventory, and capable of stopping a line as effectively as a missing casting.

Industrial manufacturing. Conveyor belting, industrial hoses, seals and vibration isolation across process plants and material handling. Conveyor belts in particular are long-lead, high-value, and consumed on a maintenance cycle that is easy to defer until it is not.

Aerospace and defence. For European primes this compounds a dependency: an important raw material, entirely imported, concentrated in four countries, with few qualified substitutes [26]. Qualification cycles in aerospace mean that alternative-source approval is measured in quarters or years, not weeks, so the window for pre-qualifying supply outside the affected geography closed before prices moved.

Featured Exposure 3: Monsoon Season in India

India is where El Niño's classic monsoon signature has landed hardest this year, and it has landed on top of extreme heat. The India Meteorological Department recorded India's warmest August since 1901. Cumulative monsoon rainfall stood at a 13.8% deficit, with Southern Peninsular India covering Tamil Nadu, Kerala, Karnataka, Andhra Pradesh and Telangana at 24.2% deficient, and East and North East India at 25.7% deficient [29]. IMD expects September rainfall to be below normal at less than 91% of the long-period average against a September LPA of 167.9 mm, and expects above-normal maximum temperatures [29].

The rainfall deficit has become a power problem. India's driest June in twelve years triggered a 21% fall in hydropower generation. Rain recovered in July, then weakened again in August, when rainfall ran more than 16% below the long-period average as El Niño strengthened. Hydropower generation was down nearly 12% year on year through 29 August, per power ministry data, and is set to decline for a fourth consecutive month [30]. Hydro accounts for nearly 11% of India's total generation capacity [30]. Reservoir storage in the 166 reservoirs monitored by the Central Water Commission reached 109.11 BCM by mid-August, 59.4% of capacity, but 19.6% below the same point last year [31].

Demand is moving the other way. India met a record peak power demand of 270.82 GW during the May heatwave, and an evening peak of 251.964 GW at 22:45 on 21 May, which indicates all-day rather than midday-only grid pressure [32][33]. The monsoon shortfall has kept temperatures elevated and pushed farmers towards electric irrigation, sustaining high demand and contributing to small evening shortages when solar generation fades [30].

The labour dimension is structural. Roughly three-quarters of India's workforce, about 380 million people, works in heat-exposed sectors, and up to 90% of the labour force works informally, without contracts guaranteeing rest breaks or employer liability [34]. On a single day in late April, all fifty of the world's hottest cities were in India [34].

Industries affected

Automotive. The exposure is concentrated in Tier 2 and Tier 3 component manufacturer operations that are hot, power-hungry and hard to air-condition: steel forging, foundry work, casting, heat treatment, and machining. The Maharashtra, Gujarat and Tamil Nadu supplier clusters feed European and Asian OEM build schedules directly. Tamil Nadu also sits inside the 24.2% rainfall deficit zone in the south [29].

Industrial manufacturing. Any electricity-intensive process competing with residential cooling demand during a record peak. The evening peak structure matters here: it removes the traditional option of shifting energy-intensive runs to night shifts, because the night is no longer slack.

4 Outlook: The Rest of 2026

Duration is no longer the main uncertainty. WMO puts persistence through February 2027 at nearly 100% [1]. The scenarios below therefore turn on peak intensity, not on whether the event continues.

Best case

El Niño peaks late in the year, at the lower end of very strong. Panama holds at 32 daily transits without further draft reduction, and the 1 October cut to 47.5 ft is postponed again. Southeast Asian rainfall in the final quarter is merely below normal rather than severely deficient, and natural rubber holds near 240 cents rather than pushing higher. India's north-east monsoon, from October to December, is normal, and reservoir storage recovers before the Rabi season.

Base case

El Niño strengthens to "very strong" and peaks between November and February, consistent with the WMO outlook [1]. Panama continues its published sequence, with the 47.5 ft draft limit taking effect on 1 October and transits held at 32; auction prices stay elevated and vehicle carriers stay third in line for reallocated slots. Natural rubber tightens further as the tapping season ends and Q4 dryness reduces yields. India's hydropower shortfall persists into Q4, grid tightness continues in evening peaks, and Tier 2 and Tier 3 output constraints flow through to OEM build schedules into Q1 2027. Europe sees no direct effect until the late-winter window opens.

Worst case

El Niño peaks at the upper end of the very strong range and ranks among the strongest events since 1950. Panama moves below 32 transits and cuts draft further, with the January 2026 precedent of 24 daily transits and 44 ft draft as the reference for how far it can go [17]. Southeast Asian drought runs six to eight months rather than the normal one to three, cutting latex yields hard and taking natural rubber into price territory where tyre and elastomer producers cannot pass through fast enough to protect margin. India's north-east monsoon fails, hydropower stays suppressed through the dry season, and industrial load shedding returns to the southern and western manufacturing states.

5 Outlook: Into 2027

WMO's assessment is explicit that climate impacts continue well into 2027, and that El Niño's effect on global temperature can be most pronounced in the year after development [1]. On current forecasts the combination of that lag with the underlying warming trend is expected to make 2027 the hottest year on record by a clear margin [60]. For planning purposes, 2027 is the year this event is felt most, not 2026.

Best case

The event decays through Q1 2027 and the Pacific returns to neutral by the second quarter. The late-winter signal falls the favourable way for Europe's waterways: wetter conditions across western and southern Europe from January to March recharge the Alpine and upper Rhine catchments and produce a normal or better 2027 navigation year [37]. Northern Europe tends colder and drier in the same window, so this is a regional split rather than a continent-wide recovery. Panama's Gatún Lake refills through the 2027 wet season, and restrictions lift by mid-year. Southeast Asian rainfall normalises early enough that the lagged yield damage to perennial crops is limited to one season.

Base case

El Niño persists into early 2027 and decays through the first half, with impacts trailing it. Natural rubber stays tight through 2027 and the 2026 deficit carries into the following balance sheet. Panama runs restricted through the 2027 dry season, from roughly January to April, before the wet season decides whether restrictions ease. European waterways get a wetter winter and a workable spring, then face the 2027 low-water season with catchments that have had one recovery cycle rather than two. India's 2027 south-west monsoon is the pivot: post-El Niño years are frequently better, but the transition timing determines this.

Worst case

The event peaks very late or decays slowly, holding impacts across the whole of 2027. Two compounding risks matter more than the headline. First, the delayed European mechanism in section 4 expresses: a positive winter NAO develops behind the event and Central Europe gets a dry summer in 2027 [38][39], arriving on catchments that have had one recovery cycle rather than two. Second, the transition risk at the other end: a fast flip from very strong El Niño to La Niña brings its own pattern of flooding in Southeast Asia and Australia and drought in the southern United States, meaning the exposure map changes rather than clears.

7 Sources

Official meteorological and hydrological

[1] WMO, *El Niño set to become very strong, raising risks of extreme weather into 2027*, press release, 3 September 2026: wmo.int/news/media-centre/el-nino-set-become-very-strong-raising-risks-of-extreme-weather-2027

[2] WMO, *El Niño/La Niña Update*, August 2026: wmo.int/resources/publication-series/el-ninola-nina-updates/august-2026

[3] WMO, *Global Seasonal Climate Update, September to November 2026*: wmo.int/resources/publication-series/global-seasonal-climate-updates/gscu-son2026

[4] Hong Kong Observatory, *El Niño and La Niña: background information* (NOAA schematics): hko.gov.hk/en/eservices/files/webdocs_4001_e.pdf

[29] India Meteorological Department, August 2026 summary and September outlook, reported via Business Standard, 1 September 2026: business-standard.com/india-news/india-hottest-august-since-1901-monsoon-rainfall-deficit-imd-2026-el-nino-126090100163_1.html

[31] Central Water Commission reservoir storage bulletin, mid-August 2026

[32] India Ministry of Power, record peak demand, 22 May 2026: phys.org/news/2026-05-india-generates-power-demand-surges.html

Official operators, regulators and institutions

[16] Panama Canal Authority, *Panama Canal Adopts Additional Measures to Address Reduced Precipitation in the Canal Watershed*, 20 August 2026: pancanal.com/en/panama-canal-adopts-additional-measures-to-address-reduced-precipitation-in-the-canal-watershed/

[18] Panama Canal Authority, Advisory to Shipping, 20 August 2026, reported via DTN, 2 September 2026: dtnpf.com/agriculture/web/ag/columns/cash-market-moves/article/2026/09/02/panama-canal-authority-adopts-new

[26] ETRMA natural rubber supply chain briefing: etrma.org/key-topics/materials/natural-rubber

[30] India power ministry generation data through 29 August 2026, reported via Business Today, 2 September 2026: businesstoday.in/india/story/power-crunch-ahead-weak-monsoon-cuts-hydro-output-as-indias-electricity-demand-stays-elevated-552753-2026-09-02

Research and academic

[34] Carnegie Endowment for International Peace, *India's Heatwave Is a Warning for the Future*, June 2026: carnegieendowment.org/emissary/2026/06/india-heatwave-electricty-climate

[36] Brönnimann, S., *Impact of ENSO on European Climate*, ECMWF seminar proceedings: ecmwf.int/sites/default/files/elibrary/2012/12119-impact-enso-european-climate.pdf (see also *Impact of El Niño-Southern Oscillation on European climate*, Reviews of Geophysics 45, 2007)

[37] *Impact of strong and extreme El Niños on European hydroclimate*, Tellus A, January 2020: tandfonline.com/doi/full/10.1080/16000870.2019.1704342

[38] A. Scaife (Met Office and University of Exeter) et al. on the delayed ENSO to North Atlantic Oscillation connection, reported via Physics Today, October 2025:

physicstoday.aip.org/news/echoes-of-el-nino-and-la-nina-affect-the-atlantic-a-year-later

[39] *A positive phase of the winter North Atlantic oscillation is associated with drought in Central Europe the following summer*, Communications Earth & Environment, June 2026: nature.com/articles/s43247-026-03729-z

Company statements and trade press

[17] Panama Canal 2026 restriction sequence and January 2026 precedent, Rio Times, 5 September 2026: riotimesonline.com/panama-canal-economy-2026/

[19] Panama Canal draft and transit limits 2026, watershed rainfall and inflow deficits, auction pricing: blog.gettransport.com/trends-in-logistic/panama-canal-draft-transit-limits-2026/

[20] *Panama Canal restricts traffic amid Hormuz crisis*, Al Jazeera, 3 September 2026: aljazeera.com/news/2026/9/3/panama-canal-restricts-traffic-amid-hormuz-crisis-why-this-matters

[21] Vásquez interview and revised Neopanamax booking rules, Bloomberg via gCaptain, 28 August 2026: gcaptain.com/panama-canal-loosens-neopanamax-booking-rules-as-capacity-tightens/

[22] Vásquez statement, Inside Climate News, 25 August 2026: insideclimatenews.org/news/25082026/todays-climate-el-nino-drought-panama-canal/

[23] Panama Canal draft restrictions and shipowner impact, Nautilus Shipping, August 2026: nautilusshipping.com/news-and-insights/panama-canal-draft-restrictions-2026-what-shipowners-need-to-know

[24] Rubber futures and ANRPC balance, TradingEconomics, 1 September 2026: tradingeconomics.com/commodity/rubber

[25] Thai natural rubber export data, first half 2026, via TradingEconomics

[27] CRISIL Ratings data and JK Tyre results, Business Standard, 24 August 2026: business-standard.com/industry/news/tyre-makers-capex-expansion-margins-natural-rubber-prices-126082400607_1.html

[28] Tyre industry price adjustment notices, April to May 2026

[33] India evening peak demand analysis, Outlook Business, 29 May 2026: outlookbusiness.com/economy-and-policy/how-extreme-heat-is-rewiring-indias-power-demand

[57] Antofagasta plc, *2026 Half Year Results* and CEO statement, 13 August 2026, revising full-year copper guidance to 625,000–655,000 t following the July storm shutdown at Los Pelambres; Codelco 2026 guidance revision to approximately 1.34 Mt; Chilean national production outlook of 5.27 Mt for 2026. Reported via Reuters, MINING.COM and Industrial Info Resources, August 2026

[59] Palm oil yield response lag to El Niño drought stress, and Indonesian BMKG September dryness outlook

[60] *'Supersizing before our eyes': UN warns of record El Niño approaching*, The Guardian, 3 September 2026: theguardian.com/environment/2026/sep/03/el-nino-supersizing-before-our-eyes-united-nations — carries the Guterres and Saulo press-conference quotes, the World Food Programme acute hunger estimate, and the regional impact summary.