

Supply Chain Risk Analysis

Aug 4, 2026

Update: 2026 European Summer Heatwave

Impacts on Energy, Automotive and Wood

● Executive Summary

Europe is in its fourth heatwave of the summer. That alone is not remarkable; 2022 and 2023 also ran several. However, the 2026 edition is different because it has been hotter than anything on record and it has arrived early. The distance between a hot summer and industrial disruption is almost always a question of timing.

Three consequences follow, and they are the subject of this report.

- The Rhine and Danube have fallen to the lowest levels ever recorded, roughly eleven weeks before the season in which that normally happens.
- Water and electricity are being rationed across a widening group of countries, with one national grid having lost its largest generator to a river too shallow to cool it.
- A wildfire in south-west France burned the forest that supplies a third of the country's pallet timber, into a wood market that had already run out of slack.

The common feature is that none of the three has a foreseeable recovery date.

● 1 The heatwave

Multiple waves in a European summer stopped being unusual some years ago. What is unusual is the severity.

On 23 June, France recorded its hottest day since measurements began in 1947, at a national average of 29.8 °C, ahead of both July 2019 and the notorious August of 2003 [C]. Western Europe went on to record its hottest June ever [C]. That single June episode is associated with more than 2,700 heat-related deaths in France alone [C]. Attribution researchers estimate that daytime heat of this kind was about ten times less likely in 2003, and that June's night-time temperatures were more than a hundred times less likely [C].

More consequential for industry than the peak temperatures is what has not happened. Rain has failed across the continent rather than in one region: from Portugal to southern Finland, most of Europe recorded below-average rainfall between April and June [C]. Repeated blocking high pressure has kept the weather systems that would normally refill the rivers away from the catchments for months [C].

Two feedbacks are keeping the deficit in place. Dried soils now absorb what little rain does fall before it reaches the river basins, so a shower registers on a weather map and not on a gauge [C]. And the Alpine snowpack and glacier melt that normally carries the Rhine through late summer was exhausted months ago [C].

That is why forecasts of rain should be treated as noise rather than signal. This is a cumulative water deficit, not a weather event, and it should be planned as a constraint that persists rather than one that clears [M].

● 2 The rivers

European low water is meant to be a late-season problem. In 2018, the benchmark drought year, the Rhine gauge at Kaub set its record on 22 October. In 2022 the low came in mid-August, and the river was workable again by late September [C]. Dutch water authorities describe the severity now being seen as something that does not normally emerge before September or October [C].

In mid-July, Kaub fell below the level at which barging stops being economic, touched the 2018 record on 31 July, and was forecast today to reach the lowest reading since the series began in 1880 [C]. Downstream at the Dutch border, the Rhine broke its all-time low on 30 July, beating a record set only four years ago [C]. On the Danube, Budapest fell well below a mark that had stood since 2018 [C].

The commercial effect is straightforward. Vessels are sailing at 15 to 20 per cent of capacity, and the cost of moving a tonne of tanker cargo from Rotterdam to Karlsruhe has gone from about €45 at the end of June to around €150 at the end of July [C]. Cargo that cannot go by barge goes by road or rail, except that the obvious rail alternative is unavailable: the right-bank Rhine line between Troisdorf and Wiesbaden has been closed in both directions since 10 July for engineering works, and stays closed until December [C].

THE FIRST NAMED INDUSTRIAL CASUALTY

ThyssenKrupp Steel has suspended shipping raw materials to its Duisburg works on its own vessels, moved to chartered shallow-draught boats at higher cost, and preventively reduced blast furnace production [C]. That is a manufacturer trimming output rather than risk running short of ore, five weeks into the event.

How bad this becomes depends less on depth than on duration, and here the historical comparison is uncomfortable.

	LOWEST READING AT KAUB	WHEN IT CAME	HOW LONG IT LASTED	WHAT IT COST
2018	25.28 cm	22 October	Over 130 consecutive days below workable levels [C, secondary source]	German industrial production cut by as much as 1.5% [C]
2022	31.48 cm	mid-August	Around 60 days, clear by late September [C]	Chemical output curtailed at Ludwigshafen; barge freight up roughly eightfold [C]
2026	25 cm on 31 July; 24 cm forecast today	late July	Below workable levels since mid-July, with no forecast recovery before late August [C/M]	Blast furnace output already reduced at one steelmaker; freight up 3.3× so far [C]

There are reasons to expect less damage than 2018. Firms have adapted since then, inland shipping now carries a smaller share of German freight than it did, and the largest chemical producer on the river says it has more expensive alternatives in place and considers the situation under control [C]. There are also three reasons to expect more:

- the Danube is down at the same time
- the rail alternative is closed
- the European road market has far less spare capacity than it did in 2018 or 2022 [C].

The base case is that levels trough this week, during the current heatwave, and then oscillate below workable thresholds rather than recovering [M]. Median forecasts keep Kaub under the economic threshold through at least the first half of August, and the longer-range models point to more blocking high pressure with no drought-breaking rain before late autumn [C]. July already ran the experiment: rain in southern Germany around the 20th produced a brief lift, and levels relapsed within days [C].

WHICH REFRAMES THE QUESTION FOR SEPTEMBER

It is no longer whether September will be difficult, but what happens when the traditional low-water season begins on top of a river already at a 145-year record with no snowpack left to feed it. The mechanism that normally refills the Rhine in late summer has already been spent, so the balance of risk points to continuation rather than recovery [M]. On the 2018 precedent, this is a constraint to plan in months rather than weeks.

● 3. Water and power

Water is now being formally rationed. The Netherlands has declared an official water shortage, one step below crisis, with river discharge that its own ministry describes as lower than in the record year of 1976. It has closed the locks at Eefde indefinitely, which blocks the Twente Canal, closed the port of Deventer indefinitely, and Zeeland has banned surface-water extraction for irrigation for the first time in its history. The ministry is candid about the trade-off: deliveries are delayed or have to move by road, but the alternative is irreparable damage [C].

In France, 99 departments carry restrictions and 43 are at the highest tier, about a month earlier than usual [C]. Hungary has appealed nationally for prudent use of water and electricity after demand overload left several thousand people in Szentendre without drinking water, and Italy's Po remains below its historic lows [C].

These are allocation decisions, and they follow a visible order: agriculture first, then navigation. Industrial abstraction sits further down the same list. No industrial curtailment has been confirmed anywhere so far, so this is a watch item rather than a finding — but surface treatment, plating, cooling towers and paint shops all sit downstream of exactly these decisions [M].

Electricity is the sharper of the two. Hungary took its Paks nuclear plant fully offline on 2 August, the first complete shutdown in the plant's 44-year history, removing 40 per cent of national generating capacity and forcing the country onto imports [C]. Romania has shut a reactor at Cernavodă with a second announced, and remains on energy alert through August [C]. France has curbed nuclear output on the Rhône and the Garonne because the cooling discharge would otherwise breach thermal limits [C].

THE PRICE SIGNAL IS ALREADY ON THE RECORD

Back in late June, when Paks had merely derated a single reactor because the Danube was too warm to cool it, Romanian day-ahead power set an EU record at €224 per MWh, with Hungary second [C]. That was one reactor partially down. The entire plant is now offline, into a hotter demand peak, which is why we expect Central and Eastern European power prices to stay elevated through August with the risk skewed above that June record [M]. This is an inference from the June precedent rather than an observed August price.

● 3.1. Eye on Automotive: What the Dacia and Ford stoppages tell us, and what they don't

One consequence has already materialised. Carmakers and battery plants in Hungary have voluntarily flexed output to relieve pressure on the grid [C]. Production has been traded for grid stability before any mandatory curtailment was imposed.

Romania is where the power story reached vehicle assembly. Mioveni and Craiova are a serious European manufacturing base, not a marginal one: more than 17,000 employees between them, close to 51 billion lei in combined turnover, and around 4.3 per cent of Romanian GDP [C]. They also draw roughly 730 GWh of electricity a year, and both run three shifts, which means paint shops, compressors, ventilation and assembly lines stay under load overnight [C]. That last detail explains why carmakers were the government's first call. Three-shift assembly is one of the few large industrial loads that sits squarely inside the 19:00 to 23:00 window Romania is trying to clear.

On 3 August, after a meeting with around eighty companies each consuming more than 50,000 MWh a year, Prime Minister Ilie Bolojan named Dacia and Ford Otosan as evidence that industry was cutting demand, and put the saving at 200 MW [C].

Neither stoppage was called by the crisis. Both were scheduled at the start of the year as collective holiday and maintenance windows. Ford Otosan disclosed its 1 to 19 August Craiova shutdown on 3 July under its listed-company reporting obligations. Renault Group's Romanian unit confirmed Mioveni's 3 to 25 August remont as a standard annual technical stop, held at about 18 per cent of nominal load, and framed its contribution to the national effort as a coincidence of timing rather than a decision. Reuters issued a clarification to the same effect [C]. Working from Ford Otosan's own sustainability reporting and Renault's per-vehicle energy intensity, Ziarul Financiar puts the capacity actually released nearer 45 MW than 200 [C]. Dacia also runs to 25 August, six days beyond the date the Prime Minister gave.

So no carmaker has yet traded a scheduled production day for grid stability, and this should not be recorded as the first automotive casualty of the drought. What it is instead is a dated watch item. Romania is importing 2,000 to 2,500 MW a day into limited cross-border capacity, and the largest automotive load on its grid is absent for a reason that expires on 19 and 25 August [C]. The Danube has no comparable expiry. If the system still needs those megawatts in the final week of the month, the request has to land on production that was scheduled to run, and that is the point at which European automotive gains a second supply-side constraint on top of the river [M]

● 4 The wildfires

Prewave has looked at European wildfires twice this season and concluded both times that there was no material impact on automotive or Tier-1 manufacturing. In mid-July, fires at Fontainebleau and in the Pyrénées-Orientales closed roads and one regional rail line but touched no plant. In late July, the Iberian fires burned more ground than any other EU country this year, and still the damage pattern was rural road closures and evacuations rather than ports, energy assets or industrial sites [C].

Those calls were right, and the reason they were right is what makes the next one different. A fire becomes a supply chain event when it destroys an input, closes a corridor, or damages a plant. Until 22 July, this season's fires burned scrub, pasture and mixed woodland in places with no concentrated industrial user of the material. Nothing was lost that anybody was waiting for.

The Gironde fire is the exception. It started on 22 July and burned roughly 42,000 hectares in nine days before being brought under control on 1 August — the largest wildfire in France since 1949, with more than 240 buildings destroyed and around 220,000 people evacuated [C]. What it burned was the Landes de Gascogne, Europe's largest managed pine forest: not amenity woodland but an industrial plantation of maritime pine, established under a law of 1857, with a full downstream chain of nurseries, sawmills, paper mills and panel plants behind it. Damage to the sector is expected to exceed €500 million [C].

Several well-known manufacturers stopped or evacuated as the fire advanced. Airbus Atlantic evacuated its Salaunes site, which builds fuselage sections for the A220 and A350. Dassault Aviation moved sensitive equipment out of Martignas and Cestas and kept most of its Mérignac and Martignas staff at home. ArianeGroup had four sites inside the evacuation zone, one of them classified Seveso, covering some 3,400 employees in the region. Roxel France took protective measures at Saint-Médard-en-Jalles, and the fire front came within four kilometres of the Laser Mégajoule facility at Le Barp [C]. Separately, during June's heatwave, a fire at the Smurfit Westrock paper mill at Biganos forced the evacuation of 450 staff and destroyed thousands of tonnes of stored bark and recovered paper [C]. Regional reporting puts around 13,000 Gironde businesses in the area cut off by the fire, with fears of a wave of insolvencies among the smallest [C].

On the wood industry specifically, the honest position is that the damage is not yet countable. Wood-processing plants stopped because road restrictions prevented log deliveries, and the sector's own federation has said reliable estimates are impossible while forest access remains restricted [C]. **We have found no named, sourced permanent closure of a wood producer in the burn zone**, and anything stronger than “production halted for access reasons” should wait for that assessment.

COUNTABLE EXPOSURE

Between 30 and 40 per cent of the sawn timber that becomes pallets in France comes from this massif [C].

That is the number that turns a regional fire into a European industrial question, because it landed on a wood market that had already absorbed three shocks in succession. The bark beetle crisis of recent seasons cut harvesting volumes across Germany and Austria, Central Europe's main supply regions. The EU's ban on Russian roundwood and wood products, in force since July 2022, removed roughly 1.5 million cubic metres of birch plywood from the European market, Russia being the world's largest birch supplier. And new EU traceability rules now require logs, sawn timber, pallets, plywood and paper to be traced back to the plot they came from, which is already slowing log flows into European sawmills [C]. German softwood sawmill output was down 17 per cent year on year before anything burned [C].

There is also a clock running. Fire-damaged timber can still be sawn if only the bark burned, sent to paper or panel plants if worse, and burned for energy as a last resort — but burnt trees become vulnerable to fungi and insects quickly, so the next few months are a triage exercise [C]. The plausible outcome is a short-term glut of salvage logs that depresses prices, followed by a hole in regional supply lasting decades, since replanted stands take thirty to forty years to reach harvest [M].

For a manufacturer, none of this arrives as a line on a bill of materials. Wood arrives in the layer underneath — pallets, crates, export boxes, plywood decking in returnable racking, trailer flooring, dunnage. It is cheap, so it is rarely dual-sourced or held in depth. It usually sits in indirect spend or inside a logistics provider's scope, so it is invisible on a procurement dashboard. And it fails as a delay rather than as a price: the first symptom is a shipment that cannot leave, not a variance on a cost report [M].

● 5 Limitations and method

Every figure above is drawn from named, dated public reporting, marked [C] and listed in Sources. Forward-looking statements — the timing of the trough, the September outlook, August power prices, salvage outcomes and the packaging exposure — are analytical inference, marked [M].

Four things we could not confirm are worth stating plainly. There is no named permanent closure of a wood producer in the burn zone; the confirmed picture is stoppages caused by access restrictions. There is no August electricity price observation available, so the outlook rests on a June record and is explicitly an inference. There is no confirmed industrial water curtailment anywhere; the read-across from agricultural and navigation restrictions is our own reasoning from the observed sequence. And the 42,000-hectare figure is burned area, not commercial timber loss, with salvage recovery rates still unknown.

Smaller caveats: the 2018 duration figure comes from a secondary compilation rather than a primary gauge series; France's 23 June national average is reported by different outlets as both 29.8 °C and 30.0 °C; the EU traceability regulation's application date has been revised more than once; and the Gironde site accounts come from national and international press reporting rather than company statements, except where a company is quoted directly.

Out of scope: agricultural and food impacts, household water supply beyond the incidents cited, tourism, insurance recovery, and the attribution of any individual event to a specific climate driver.

No Prewave platform alert data was available for this report. A cross-check of Tier-1 supplier locations against the Rhine corridor, the Middle and Lower Danube and the Aquitaine burn zone would convert the exposure described here from a mechanism into named exposure.

● Sources

[1] Reuters, “Thyssenkrupp Steel grounds its own fleet as Rhine river runs low,” 14 July 2026

bairdmaritime.com/shipping/dry-cargo/bulkers/thyssenkrupp-steel-grounds-its-own-fleet-as-rhine-river-runs-low

[2] Reuters, “Rhine navigable depth inches toward unprecedented low as dry spell persists,” 31 July 2026

bairdmaritime.com/shipping/inland-shipping/rhine-navigable-depth-inches-toward-unprecedented-low-as-dry-spell-persists

[3] Reuters, “Rhine river levels drop further as light rain fails to ease drought,” 27 July 2026

bairdmaritime.com/shipping/inland-shipping/rhine-river-levels-drop-further-as-light-rain-fails-to-ease-drought-shipping-woes-persist

[4] Bloomberg, “Europe’s key rivers are drying up as extreme heat impact widens,” 2 August 2026

miningweekly.com/article/europes-key-rivers-are-drying-up-as-extreme-heat-impact-widens-2026-08-02

[5] NL Times / AD, “Dutch gov’t & water boards gathering for emergency meeting over falling water levels,” 30 July 2026

nltimes.nl/2026/07/30/dutch-govt-water-boards-gathering-emergency-meeting-falling-water-levels

[6] NL Times / De Telegraaf / Rijkswaterstaat, “Rhine reaches lowest water level ever recorded at Dutch border,” 30 July 2026

nltimes.nl/2026/07/30/rhine-reaches-lowest-water-level-ever-recorded-dutch-border

[7] ICIS, “Rhine levels continue to drop below critical levels,” 28 July 2026

icis.com/explore/resources/news/2026/07/28/11226257/rhine-levels-continue-to-drop-below-critical-levels/

[8] Freight Perspectives, “Rhine Water Levels 2026: Kaub Gauge Breaches the Critical Low-Water Line,” 15 July 2026

freightperspectives.com/p/rhine-water-levels-2026-kaub-forecast

[9] Associated Press, “The Dry Danube,” 31 July 2026

fortune.com/2026/07/31/danube-drought-cruise-ship-stranded-nuclear/

[10] Balkan Green Energy News, “Romania, Hungary hit by highest power prices in Europe amid heat, outages,” June 2026

balkangreenenergynews.com/romania-hungary-hit-by-highest-power-prices-in-europe-amid-heat-outages/

[11] Connexion France, “France heads for fourth heatwave of year next week”

connexionfrance.com/news/france-heads-for-fourth-heatwave-of-year-next-week-highs-of-40c-forecast/803655

[12] *Connexion France, “France drought 2026: almost all departments on alert as water restrictions start early”*

connexionfrance.com/practical/france-facing-exceptional-early-drought-almost-all-departments-on-drought-alert/802080

[13] *NPR, “France records its hottest day ever as Europe withers in heat wave,” 23 June 2026*

npr.org/2026/06/23/g-s1-129586/france-red-heat-wave-alert

[14] *WMO, “Western Europe has hottest June on record”*

wmo.int/media/news/western-europe-has-hottest-june-record

[15] *Carbon Brief, “France’s June heatwave caused more than 2,700 heat-related deaths”*

carbonbrief.org/guest-post-frances-june-heatwave-caused-more-than-2700-heat-related-deaths

[16] *World Weather Attribution, “Increasingly hot Europe faces more severe droughts and growing challenges for water and land management”*

worldweatherattribution.org/increasingly-hot-europe-faces-more-severe-droughts-and-growing-challenges-for-water-and-land-management/

[17] *France 24, “France: Major Gironde wildfire contained,” 1 August 2026*

france24.com/en/france-major-wildfire-contained-but-uncontrolled

[18] *France 24, “Wildfires have scorched 115,000 hectares across France this year,” 25 July 2026*

france24.com/en/europe/20260725-france-evacuates-55-000-more-as-bordeaux-fires-worsen

[19] *RTBF / AFP, “Incendies en Gironde : que va devenir le bois des milliers d’hectares de forêt ravagés ?,” 2 August 2026*

rtbf.be/article/incendies-en-gironde-que-va-devenir-le-bois-des-milliers-d-hectares-de-foret-ravages-11763481

[20] *RTBF, “Incendies en Gironde : des milliers de petites entreprises à l’arrêt,” 2 August 2026*

rtbf.be/article/incendies-en-gironde-des-milliers-de-petites-entreprises-a-l-arret-la-crainte-d-une-vague-de-faillites-11763524

[21] *Euronews, “Les incendies en France menacent des sites de défense et frappent l’économie régionale,” 28 July 2026*

fr.euronews.com/business/2026/07/28/incendies-en-france-menacent-des-sites-de-defense-et-frappent-leconomie-regionale

[22] *La Libre, “Défense, spatial, aéronautique : ces sites sensibles menacés par le feu en Gironde,” 27 July 2026*

lalibre.be/international/europe/2026/07/27/defense-spatial-aeronautique-ces-sites-particulierement-sensibles-et-dangereux-sont-menaces-par-le-feu-en-gironde-DLBJNHPPV5GWRO4EXDWFJJVOQQ

[23] *ICI (France Bleu), “Un incendie se déclare à l’usine à papier Smurfit de Biganos,” 25 June 2026*

ici.fr/nouvelle-aquitaine/gironde-33/biganos/un-incendie-se-declare-a-l-usine-a-papier-smurfit-de-biganos-3959673

[24] Graphiline, “Incendie chez Smurfit Westrock à Biganos : 12 700 tonnes de matières détruites”

graphiline.com/article/52221/incendie-chez-smurfit-westrock-a-biganos-12-700-tonnes-de-matieres-detruites

[25] Global Wood Markets Info, “France’s timber industry faces half-billion-euro damage after devastating wildfires,” 3 August 2026

globalwoodmarketsinfo.com/frances-timber-industry-faces-half-billion-euro-damage-after-devastating-wildfires/

[26] Global Wood Markets Info, “After the wildfires: How Europe’s timber industry manages fire-damaged forests,” 30 July 2026

globalwoodmarketsinfo.com/after-the-wildfires-how-europes-timber-industry-manages-fire-damaged-forests/

[27] Global Wood Markets Info, “European sawmills starve for logs as Brussels tightens the rules,” 22 July 2026

globalwoodmarketsinfo.com/european-sawmills-starve-for-logs-as-brussels-tightens-the-rules/

[28] Fédération Nationale du Bois pallet commission via Fordaq, “Europe’s wooden pallet market,” 22 April 2026

fordaq.com/news/Europe%E2%80%99s_wooden_pallet_market_wood_118054.html

[29] Resourcewise, “European Log and Lumber Markets Are at a Turning Point”

resourcewise.com/market-watch-blog/european-log-and-lumber-markets-are-at-a-turning-point

[30] Indufor, “Changes in Eurasian Wood Industry — Focus on Sawn Softwood and Birch Plywood”

induforgroup.com/changes-in-eurasian-wood-industry-focus-on-sawn-softwood-and-birch-plywood/

[31] TechTimes, “Gironde Wildfire Exposes Pine Monoculture Trap,” 31 July 2026

techtimes.com/articles/322460/20260731/gironde-wildfire-exposes-pine-monoculture-trap-replanting-same-forest-risks-next-megafire.htm

[32] Copernicus EFFIS, via Spain in English, 20 July 2026

[33] Prewave, El Niño Summer 2026: Europe Outlook, 5 June 2026; Iberian Peninsula Wildfires, 23 July 2026; France Wildfires — Fontainebleau & Tréviach, 14 July 2026

[34] Reuters, “Romania blasts rocks to reroute cooling Danube water to nuclear reactor,” 3 August 2026 (carries the clarification that Ford Romania’s pause was scheduled in advance)

internazionale.it/ultime-notizie-reuters/2026/08/04/romania-blasts-rocks-to-reroute-danube-water-to-reactor-hungary-gets-reprieve

[35] Nuclearelectrica SA, current report to the Bucharest Stock Exchange on the controlled shutdown of Cernavodă Unit 1, 27 July 2026 m.bvb.ro/infocont/infocont26/SNN_20260727190124_RC-current-report-debit-dunare-----bvb.pdf

[36] Renault Group Romania statement on the Mioveni remont, 3 to 25 August, via Economica.net, 3 August 2026 anchetaonline.ro/oprirea-productiei-dacia-fost-decisa-cauza-crizei-energetice-anunt-oficial-335615/

[37] Ziarul Financiar, plant-level energy analysis of Mioveni and Craiova, 4 August 2026 (source of the 730 GWh combined annual consumption, the circa 45 MW released, and the Ford Otosan sustainability report figure of 1,043,802 GJ for Craiova in 2025) zf.ro/companii/de-ce-oprirea-productiei-auto-din-august-devine-cea-mai-buna-veste-a-zilei-pentru-sistemul-energetic-dacia-si-ford-au-intrat-de-ieri-in-remont-iar-aumovio-a-investit-deja-in-eficienta-23209241

[38] Energynomics, readout of the government press conference at Victoria Palace, 3 August 2026 (the meeting with circa 80 companies above 50,000 MWh, the 19:00 to 23:00 reduction window, and the 200 MW figure) energynomics.ro/en/govt-asks-major-industrial-producers-to-voluntarily-reduce-energy-consumption-dacia-and-ford-already-stopped-production

[39] Gândul, “Ce înseamnă pentru economia României giganții Dacia și Ford,” 3 August 2026 (over 17,000 employees, circa 51 billion lei combined turnover, circa 4.3 per cent of GDP) gandul.ro/financiar/oprire-productie-dacia-ford-impact-pib-energie-20970354

[40] Romania Insider, “Romania’s Nuclearelectrica imports electricity from Ukraine as low Danube levels disrupt nuclear output,” 3 August 2026 romania-insider.com/romania-electricity-imports-ukraine-low-danube-august-2026

[41] ORF.at, “Stromkrise in Rumänien: Dacia und Ford stoppen Produktion,” 3 August 2026 (daily import requirement of 2,000 to 2,500 MW)