DAILY AIR-QUALITY BRIEFING · DELHI

Delhi Air Quality — Daily Report

17 July 2026 · Analysis window: 10 AM 16th July to 10 AM 17th July · Compared with last year: avg of 10th Jul - 24th Jul 2025 (same +/-7 days), matched stations

Delhi's average AQI today is **183 (Moderate)**, +111 points vs last year — and **+20 points of that survive weather correction**: the part the city's own pollution produced. Today's reading itself is weather-inflated by about 85 points.

"मौसम हटाने पर भी — दिल्ली की हवा लगातार 49 दिन से पिछले साल से बदतर। एक दिन भी राहत नहीं। यह टिकाऊ प्रदूषण है, मौसम नहीं।"

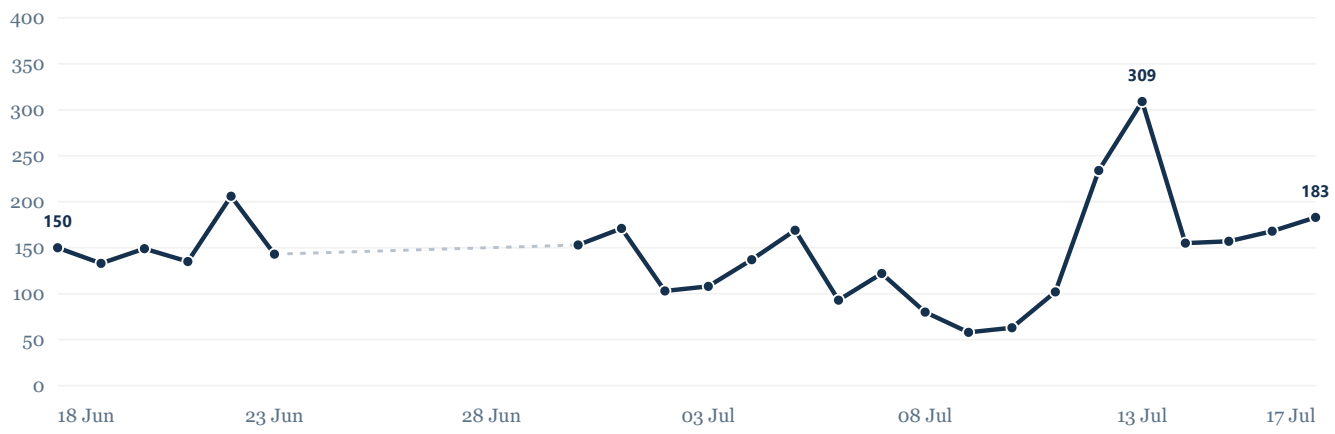
183
City average AQI (CPCB) — Moderate

98
Weather-corrected AQI (the level the city's own pollution justifies)

+111
AQI points vs the same days last year (matched stations, n=38)

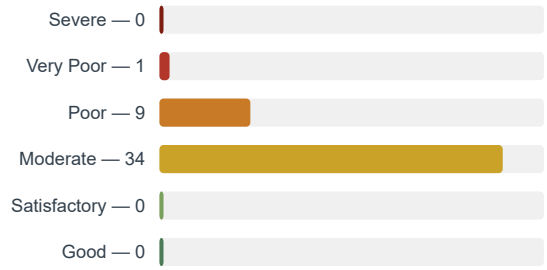
186
AQI where most people live (population-weighted) — worse than the plain average

1 · The last 30 days



Dashed grey = days without a full CPCB bulletin (6 of 30 days).

Stations by air-quality category (count of stations, today)



Not one of the 44 reporting stations had even "Satisfactory" air today — let alone "Good".

How to read this report

The **weather-corrected** number removes rain, wind and mixing effects using a model trained on five years of hourly data — it shows what the city's own emissions justify. A gap between the two numbers is the weather's contribution, in either direction.

2 · Station detail

The observed worst station today is **Anand Vihar** (AQI 331, Very Poor, driven by PM10). Observed peaks on a single day can be weather-driven; the weather-corrected hotspot below is the sturdier fact.

> **Against the world standard:** even after removing the weather's help, Delhi's fine-particle level (PM2.5) is **43 micrograms per cubic metre (µg/m³) — 2.9× the WHO safe limit of 15**. The worst weather-corrected hotspot is **Wazirpur** at 49 µg/m³ — **3.3× the WHO limit**.

> **How widespread:** after weather correction, **30 of 31** comparable stations are worse than last year — the typical station is 21 AQI points higher. This is a city-wide rise, not a few bad spots.

Worst stations today (observed CPCB AQI) — top 8 of 44 reporting

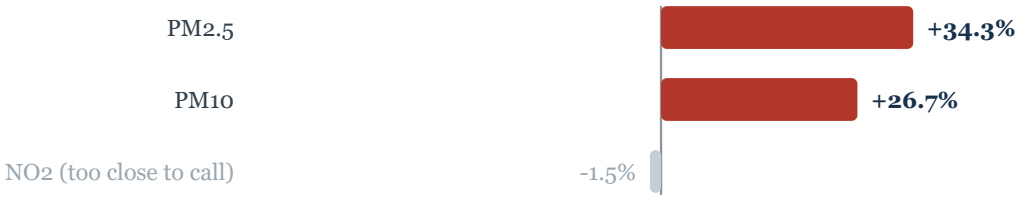
Station	AQI	Category	Main pollutant
Anand Vihar	331	Very Poor	PM10
Wazirpur	270	Poor	PM10
Bawana	254	Poor	PM2.5
Alipur	246	Poor	PM10
Jahangirpuri	235	Poor	PM10
CRRI Mathura Road	224	Poor	PM10
Mundka	222	Poor	PM10
R K Puram	221	Poor	PM10

Station AQI = CPCB bulletin method (the worst pollutant sub-index at each station). Full station list in the day's data file.

3 · Weather or policy? The attribution

Observed change vs last year: +111 AQI points. (the weather model's own station set puts the observed change at +107) After weather correction the real, policy-relevant change is **+20 points** — pollution the city itself produced.

Real (weather-corrected) change vs last year, by pollutant



Bars right of the line = genuinely worse than last year after weather correction; left = genuinely better. Same-station comparison, ±7-day 2025 baseline.

The weather evidence

Weather driver	Last year (same weeks)	Today	Fairness check
Rain	5.5 mm	0 mm	typical — a fair comparison
Wind speed	6.9 km/h	11.7 km/h	last year was unusual for the season — we don't lean on this one
Mixing height	491.9 m	797.5 m	typical — a fair comparison
Inversion	0.4 °C	no data	last year was unusual for the season — we don't lean on this one
Temperature	28.8 °C	34.6 °C	last year was unusual for the season — we don't lean on this one

"Fairness check" compares last year's baseline weather with the 2021–24 history for these same calendar days — a comparison is never built on a freak baseline.

> **Honesty box:** On days it has never seen, the weather-correction model explains about 37% of the variation — so we treat its outputs as estimates, not exact points. The weather-corrected year-on-year change for fine particles is measured to within roughly ±1 percentage points of sampling error, before model uncertainty. Gas data carries documented unit-inconsistency (peer-reviewed international research, 2025); we lead on the reliable PM2.5/PM10. Percentages compare the same stations in both years; single-day observed spikes are never used as the headline.

4 · Weather's share vs the city's own pollution — 2026 so far

This is the most important picture in the report: it separates **how much of Delhi's change in pollution was the weather** from **how much was the city's own doing** — its traffic, dust, burning and industry.

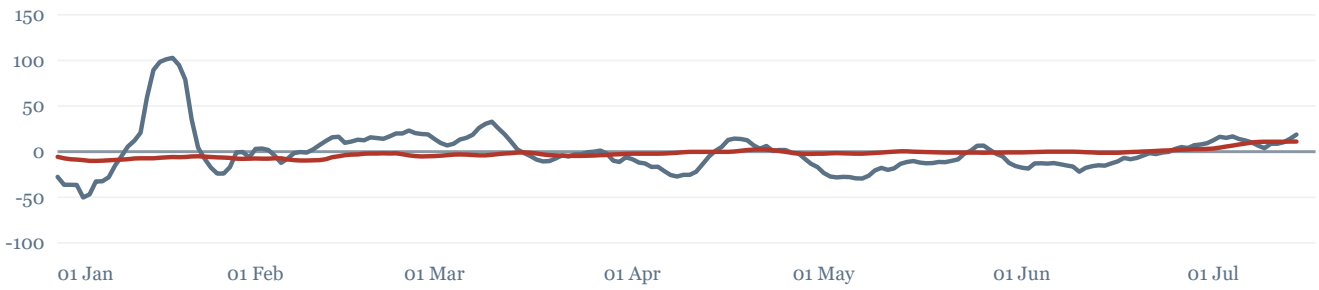
What the two lines are. Each line is this year's level minus the average of the same ±7 days last year, in µg/m³. The **grey line** is the **raw observed** change — exactly what the monitors measured, weather and all. The **red line** is the same change **after our model removes the weather** (wind, rain, temperature, mixing height), leaving what the city's own emissions actually did.

Why it matters. A calm, still year makes the air look worse and a windy, wet year makes it look better — neither is anyone's policy. Raw numbers therefore flatter or punish a government for the sky's luck. The red line is the accountability signal: it answers "did the city's own pollution actually go up or down?" The **vertical gap between the lines is the weather's estimated share** of the change. When the red line sits *above* the grey, the weather was *helping* and hiding a real worsening; when it sits below, the weather was making a genuine improvement look worse than it was.

What de-weathering is pointing to here. Read the red line's shape across the year: where it climbs, the city's own pollution rose regardless of the weather — that is the part policy is responsible for.

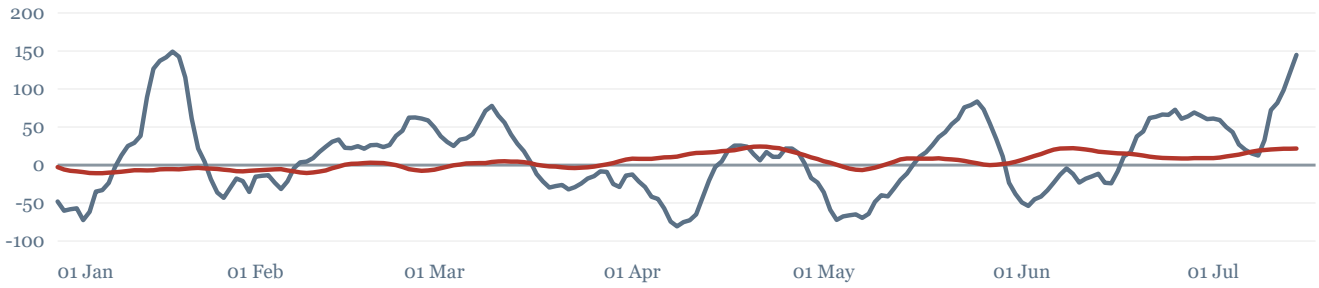
PM2.5 — the year so far (µg/m³ vs the same days last year, 7-day average)

■ Observed change (weather included) ■ Weather-corrected change — the city's own pollution (model estimate)



PM10 — the year so far (µg/m³ vs the same days last year, 7-day average)

■ Observed change (weather included) ■ Weather-corrected change — the city's own pollution (model estimate)



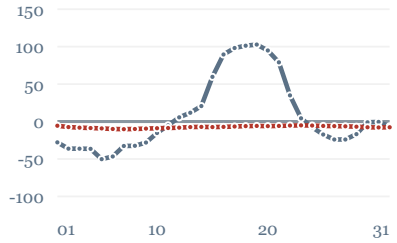
This chart is per pollutant in µg/m³ and is **retrospective** (recomputed now with our current model); the report's headline is today's city AQI in index points, on the model as it stood today. Different quantities, windows and engines — the newest point here need not equal the headline.

'Last year' is the average of the same ±7 days in 2025 (a 15-day average, not a single day). This year view is a **retrospective re-estimate**: every 2026 day was recomputed now with our current weather-correction model (trained through 2026-07-11) — these are **not** the figures we published on those days. One consistent model removes week-to-week refit jumps so the whole year reads on one basis; the trade-off is that early-2026 points use a model that also saw later-2026 data (a look-ahead re-estimate — fine for a descriptive year view, not a forecast). Where a day's archived figure differs, the archived figure is the one published that day — e.g. 10 July was published at about 37 µg/m³ PM2.5 de-weathered on that day's model; this retrospective line puts it near 44. The red line is a model estimate (typical margin ≈±10 µg/m³ PM2.5 / ±15 µg/m³ PM10 on these weekly averages), so the gap between the lines is an estimate too. Additionally smoothed with a 7-day centered average (needs ≥3 reconstructed days; 198 days existed, 198 usable after the full-network floor).

5 · PM2.5 — month by month (2026)

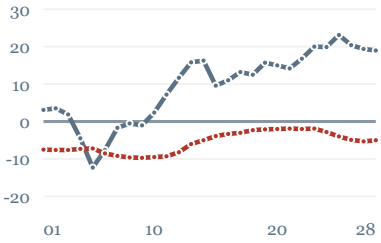
■ Observed change (weather included) ■ Weather-corrected change — the city's own pollution (model estimate)

January · scale ±110



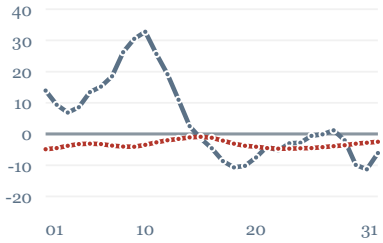
within the ±11 µg/m³ margin, but ran lower than last year on 31 of 31 days (stations 41)

February · scale ±30



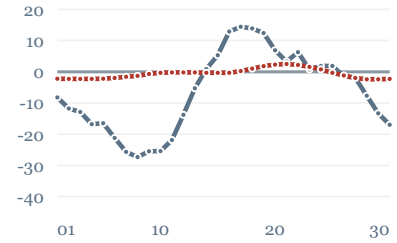
within the ±11 µg/m³ margin, but ran lower than last year on 26 of 28 days (stations 41–44)

March · scale ±40



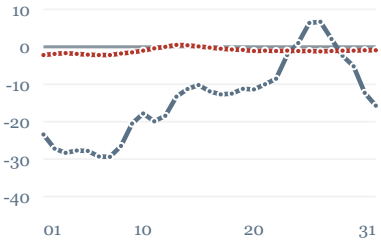
about level with last year — within the ±10 µg/m³ model margin (stations 46–47)

April · scale ±30



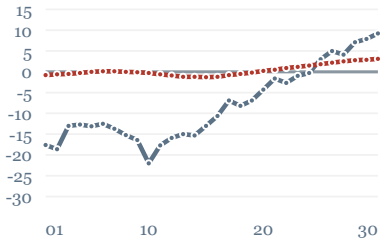
about level with last year — within the ±10 µg/m³ model margin (stations 46–47)

May · scale ±30



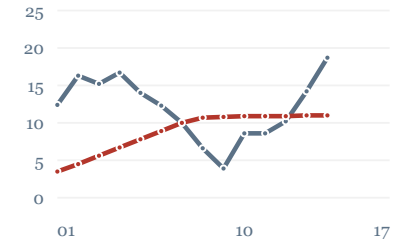
about level with last year — within the ±10 µg/m³ model margin (stations 47–54)

June · scale ±30



about level with last year — within the ±10 µg/m³ model margin (stations 52–54)

July · scale ±20



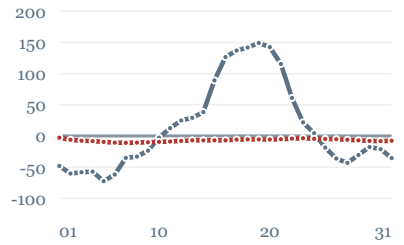
within the ±10 µg/m³ margin, but ran higher than last year so far on 17 of 17 days (stations 52–54)

Each small chart is one calendar month; the 7-day average is centered and continuous, so a month's first and last few days blend into the neighbouring months. Grey = observed change, red = the city's own (weather-corrected) change, vs the same ±7 days in 2025. The current month's last three days are not shown until they can be centered (a centered average needs three days either side).

6 · PM10 — month by month (2026)

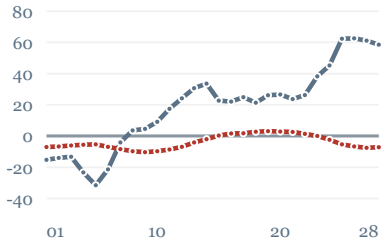
■ Observed change (weather included) ■ Weather-corrected change — the city's own pollution (model estimate)

January · scale ±150



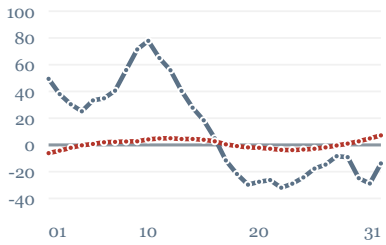
about level with last year — within the ±17 µg/m³ model margin (stations 40)

February · scale ±70



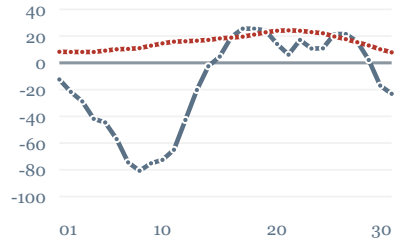
about level with last year — within the ±17 µg/m³ model margin (stations 40–43)

March · scale ±80



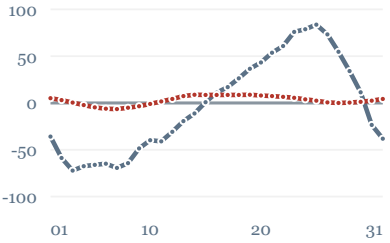
about level with last year — within the ±16 µg/m³ model margin (stations 45–46)

April · scale ±90



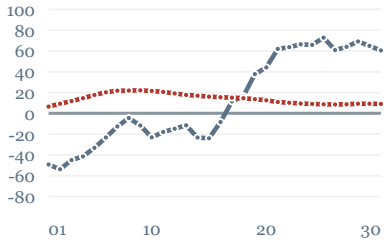
within the ±16 µg/m³ margin, but ran higher than last year on 30 of 30 days (stations 45–46)

May · scale ±90



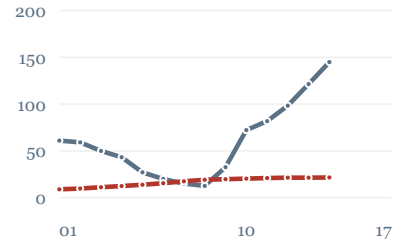
about level with last year — within the ±15 µg/m³ model margin (stations 45–53)

June · scale ±80



within the ±15 µg/m³ margin, but ran higher than last year on 30 of 30 days (stations 51–53)

July · scale ±150



the city's own pollution averaged about +17 µg/m³ above last year so far — clears the ±15 model margin (stations 51–53)

Each small chart is one calendar month; the 7-day average is centered and continuous, so a month's first and last few days blend into the neighbouring months. Grey = observed change, red = the city's own (weather-corrected) change, vs the same ±7 days in 2025. The current month's last three days are not shown until they can be centered (a centered average needs three days either side).

Annexure A · Every reporting station

All 44 stations that reported in today's window, worst first. Station AQI = CPCB bulletin method (the worst pollutant sub-index at the station).

#	Station	AQI	Category	Main pollutant
1	Anand Vihar	331	Very Poor	PM10
2	Wazirpur	270	Poor	PM10
3	Bawana	254	Poor	PM2.5
4	Alipur	246	Poor	PM10
5	Jahangirpuri	235	Poor	PM10
6	CRRI Mathura Road	224	Poor	PM10
7	Mundka	222	Poor	PM10
8	R K Puram	221	Poor	PM10
9	Dwarka-Sector 8	221	Poor	PM10
10	Pusa	215	Poor	PM10
11	Ashok Vihar	194	Moderate	PM10
12	Narela	194	Moderate	PM10
13	Vivek Vihar	192	Moderate	PM10
14	Nehru Nagar	191	Moderate	PM10
15	Rohini	191	Moderate	PM10
16	Patparganj	187	Moderate	PM10
17	Shadipur	186	Moderate	PM10
18	Okhla Phase-2	186	Moderate	PM10
19	North Campus	177	Moderate	PM10
20	IGI Airport (T3)	177	Moderate	PM10
21	Sirifort	177	Moderate	PM10
22	Dr. Karni Singh Shooting Range	177	Moderate	PM10
23	NSIT Dwarka	175	Moderate	PM2.5
24	Punjabi Bagh	174	Moderate	PM10
25	IMD Lodhi Road	171	Moderate	PM10
26	Mandir Marg	171	Moderate	PM10

Annexure A · Every reporting station (continued)

#	Station	AQI	Category	Main pollutant
27	Jawaharlal Nehru Stadium	169	Moderate	PM10
28	Sonia Vihar	169	Moderate	PM10
29	Commonwealth Sports Complex	166	Moderate	PM10
30	Major Dhyan Chand National Stadium	164	Moderate	PM10
31	Sri Aurobindo Marg	159	Moderate	PM10
32	Pusa	158	Moderate	Ozone
33	IGNOU_Maidan Garhi	155	Moderate	PM10
34	Aya Nagar	151	Moderate	PM10
35	JNU	151	Moderate	PM10
36	Najafgarh	150	Moderate	PM10
37	IHBAS	145	Moderate	PM10
38	ITO	144	Moderate	PM10
39	DTU	144	Moderate	PM10
40	NSUT Jaffarpur	144	Moderate	PM10
41	Talkatora Garden	142	Moderate	PM10
42	Burari Crossing	137	Moderate	PM10
43	Cantonment Area	132	Moderate	PM10
44	Chandni Chowk	118	Moderate	Ozone

Annexure B · Pollutant-by-pollutant (all seven)

Observed AND weather-corrected, for every pollutant we track — including the ones we deliberately never build claims on, so the reader sees the whole picture and the rules we bind ourselves with.

Pollutant	Today (obs, µg/m³*)	Today (weather-corr.)	Obs. change vs last yr	Weather-corr. change [range]	Model skill	Role in our claims
PM2.5	50.4	43.1	+87%	+34.3% [+32.8 … +35.3]	37%	Claims-eligible
PM10	210.8	97.8	+211.6%	+26.7% [+23.1 … +29.1]	37%	Claims-eligible
NO2	31.1	26.6	+9.1%	-1.5% [-11 … +10.8]	26%	Claims-eligible
NOx	27.3	21.4	+15.7%	-2% [-10.8 … +11.6] (not usable for claims)	31%	Observed context only
SO2	10	12.1	+11.6%	+15.6% [-1.2 … +37.7] (not usable for claims)	8%	Observed context only
CO	702	975.6	+8.5%	+12.5% [+4.6 … +25.7] (not usable for claims)	23%	Observed context only
Ozone	35.5	39.9	-7.9%	+15.5% [+9.8 … +20.7] (not usable for claims)	35%	Observed only — never a claim

*CO in mg/m³. “Model skill” = share of variation the weather model explains on days it has never seen (honest, out-of-sample). Ranges are the model's sampling ranges; a range spanning zero means “too close to call”.

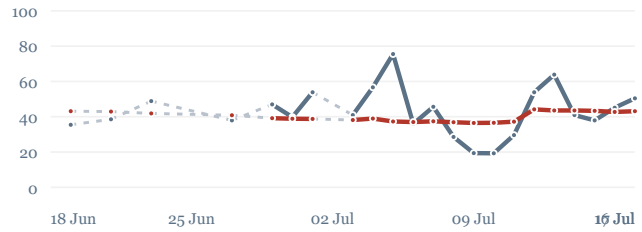
PM2.5: weather-corrected claims allowed (model skill adequate) · **PM10:** weather-corrected claims allowed (model skill adequate) · **NO2:** direction reliable (same stations + units both years); absolute levels carry the units caveat · **NOx:** not part of CPCB's AQI; weather model weak — observed facts only · **SO2:** weather model too weak to separate weather from policy — observed facts only · **CO:** weather model too weak to separate weather from policy — observed facts only · **Ozone:** rising ozone chemically signals falling traffic NO2 (standing rule: excluded so it can never be spun as 'transport improved')

Above the world standard today: PM2.5: 44 of 44 stations above the WHO daily limit as observed; even after weather correction, 44 of 44 remain above it. **PM10:** 44 of 44 stations above the WHO daily limit as observed; even after weather correction, 44 of 44 remain above it. (Weather-model matched panel.)

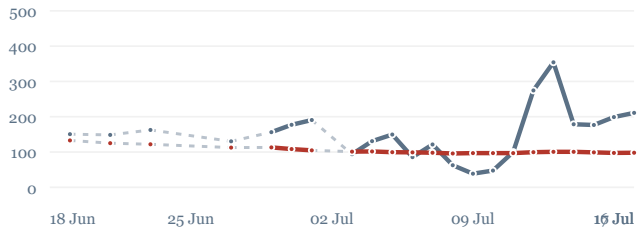
Annexure C · 30-day trends, pollutant by pollutant

Grey = observed daily level; crimson = the weather-corrected level (what the city's own emissions justify). Dashed grey bridges = days without a model run. µg/m³ (CO in mg/m³); 24h city means to 10 AM.

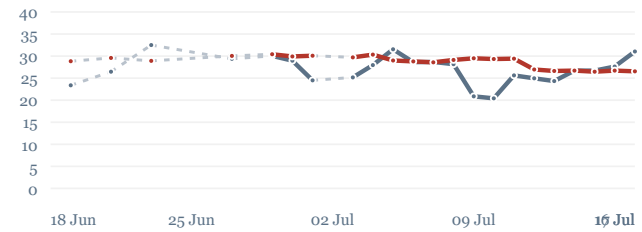
PM2.5



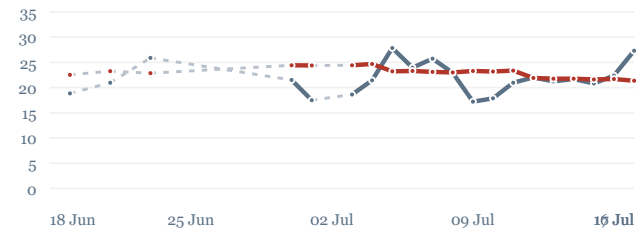
PM10



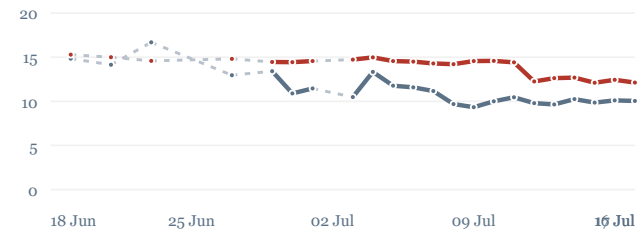
NO2



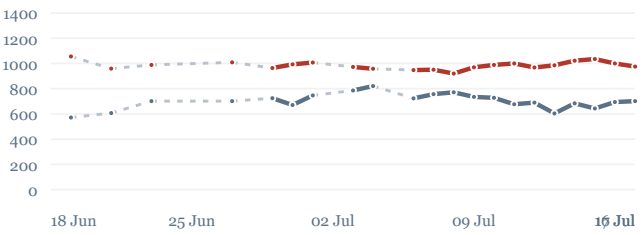
NOx



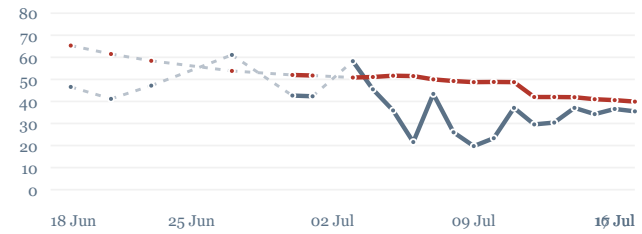
SO2



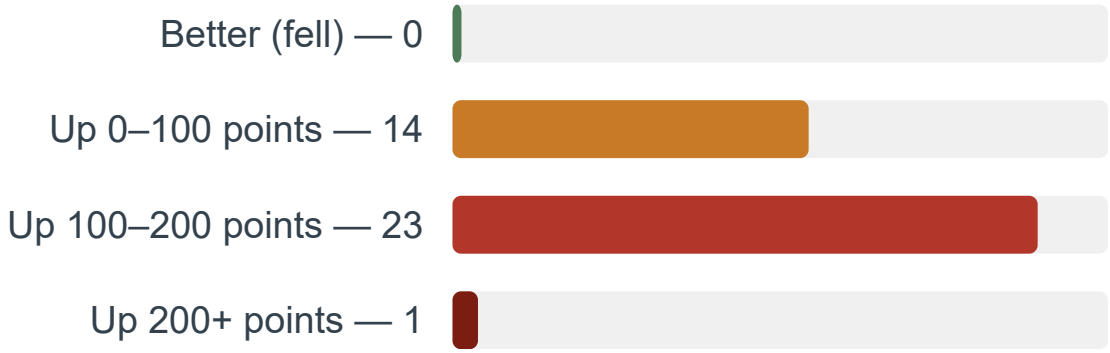
CO



Ozone



How the 38 matched stations moved vs last year (AQI points)



Annexure D · The weather evidence, in full

Each driver's value today, in last year's baseline window, and against the 2021–24 normal for these same calendar days. “z” measures how unusual last year's baseline was (beyond ±1.5 = unusual → we don't rest comparisons on that driver).

Driver	Last year (same weeks)	Today	2021–24 normal	z	Verdict
Rain	5.5 mm	0 mm	10.3	-1.11	typical — fair
Wind speed	6.9 km/h	11.7 km/h	8.9	-2.03	unusual last year — not leaned on
Mixing height	491.9 m	797.5 m	497.2	-0.09	typical — fair
Inversion	0.4 °C	no data	2.1	-3.39	unusual last year — not leaned on
Temperature	28.8 °C	34.6 °C	29.9	-1.71	unusual last year — not leaned on
Wind direction	SE (144 deg)	W (276 deg)	122	1.03	typical — fair

Weather: ERA5/Open-Meteo hourly, aggregated over the same 24h-to-10AM window as the air data. Inversion: Safdarjung soundings (when current).

Annexure E · How this report is made

Where the numbers come from

Air readings are the Central Pollution Control Board's station network in Delhi — 44 stations reported in today's window (24 hours ending 10 AM). A station's AQI is the CPCB bulletin method: the worst single-pollutant sub-index at that station.

How we compare with last year — and why a 15-day window

“Last year” is never a single day — it is the average of the same date ±7 days of 2025 (15 days), using only stations present in both years (38 matched today). There is a firm reason for the window. Delhi's day-to-day air is driven by weather systems — passing western disturbances, stagnant high-pressure spells and the mixing they control — that come and go every three to seven days; a 15-day window spans two to three of those cycles, so no single storm, calm night or shower can define “normal”. Because neighbouring days are correlated, the 15 days act like about seven independent readings — enough to cut the baseline's one-day noise roughly two-and-a-half-fold — while staying narrow enough to stay inside the same pollution season (a month-long window would blur the sharp changes at the monsoon's arrival and the late-autumn crop-burning surge). A single-date comparison would be more sensitive to one day's weather, not less, so the window is deliberately the harder-to-game choice — the same “anomaly from normal” method used for a temperature “departure from normal”. One honest limit: festival and crop-burning emissions are real pollution and stay in the numbers by design, so where a moving festival like Diwali falls at different calendar positions across the two years, its spike can sit inside one year's window and not the other's — October–November comparisons carry that caveat.

What “population-weighted” means — the technical detail

Delhi's monitors are not spread evenly over its people: the leafy centre has many stations covering few residents, while single outer-Delhi stations stand for lakhs. A plain average therefore over-hears the well-monitored centre. The population-weighted figure fixes this: the city is divided into zones, one per station — each zone is the part of Delhi closest to that station (a Voronoi map of the 39 active monitors, clipped to the NCT boundary). Each zone's population is estimated from the 70 Assembly Constituencies: the 2025 electoral rolls (≈15.61 million electors, from ECI turnout data) scaled by one ratio to the official 2025 NCT population projection (20.94 million, Registrar General of India), split by area where an AC straddles zones. A station's weight is its zone's share of Delhi's population; each day the weights of the stations that actually reported are re-scaled to sum to one, and the city figure is the weight-multiplied average. Honest limits: residents without voter registration (informal settlements) are under-counted by the elector scaling; stations added after March 2026 (e.g. JNU, Talkatora Garden) are not yet in the zone map, so they count in the plain average but not the weighted one; and no weighting can fix roadside-vs-residential siting or a monitor's own calibration.

Annexure E · How this report is made (continued)

What “weather-corrected” means

A machine-learning model (random forest), trained on five years of hourly data, learns how wind, rain, temperature and mixing height move pollution. Subtracting that effect shows what the city's own emissions justify. Honesty: on days it has never seen, the model explains about 37% of the variation — so we treat outputs as estimates, quote ranges, and never claim precision the model doesn't have.

The fairness check

Before we cite any weather driver, last year's baseline weather is compared with the 2021–24 history for the same calendar days. If last year was freakish for that driver, we don't build an argument on it — in either direction.

The rules we bind ourselves with

The headline always states the WORSE of the observed and weather-corrected numbers (never the flattering one). One number, one engine — the same quantity is never quoted from two sources. A change whose range spans zero is “too close to call”, whether it helps us or hurts us. Gas levels are never the basis of a claim (documented unit inconsistencies); gas directions may be cited when statistically clear — except ozone, which rises when traffic emissions fall and is therefore permanently excluded from our claims.

Words used

AQI — the 0–500 air-quality index (higher is worse; 0–50 ‘Good’, 301–400 ‘Very Poor’, over 400 ‘Severe’). µg/m³ — micrograms per cubic metre, the weight of pollutant in each cubic metre of air. Range — the span within which the true value very likely lies.

Report auto-generated daily from the same data files as the video, so the two can never disagree. Reviewed by the design panel on 13 July 2026.