

83

consecutive days worse than the same days last year, weather removed

Since 30 May, PM10 has not spent one day at or below last year's level once the weather's help is stripped out. Worse than last year on the observed index, +37.5 points; with the weather removed, still 2 points worse. 5 of 6 pollutants show no real improvement.

159 / 232

DAYS WORSE THIS YEAR
of all days measured in 2026,
weather removed.

+13.4

AVERAGE EXCESS, $\mu\text{g}/\text{m}^3$
PM10 above last year over the run,
weather removed.

297

THE WORST STATION
Anand Vihar, Poor, today.

The air record

20 August 2026 · Delhi, on the CPCB record and
the air itself, weather removed

The negatives, the demands, the danger

FOR THE RECORD, 20 AUGUST 2026. The monitors said 121. Observed against last year: 37.5 points worse. Weather removed: 2 points worse, on the model's count.

What this record finds today

- Weather removed, PM10 has been worse than last year for 83 consecutive days, since 30 May; 159 of 232 measured days this year sat above last year.
- 5 of 6 pollutants show no real improvement on last year once the weather is removed.
- The year is worse on the observed index itself, +37.5 points, and stays 2 points worse once the weather is removed.
- Anand Vihar read 297, Poor, while the city average read Moderate; an average is not an experience.
- Even monsoon-washed, PM2.5 is 38.8 $\mu\text{g}/\text{m}^3$, about 8 times the WHO annual guideline.

What we ask of the Government

- Publish the weather-removed series beside the raw index, every day, so the monsoon can never again be dressed up as policy.
- Explain the 83-day run on the floor of the House: which source cut, which enforcement action, is supposed to have worked?

- Name and fix the worst stations daily; a city average must never bury a neighbourhood.
- Keep the full monitoring network up: every gas channel, every hour; a meter that cannot measure is not a clean-air policy.
- State the health cost in the terms the WHO uses, not in category euphemisms.

The health hazard

- Today's category, Moderate, in CPCB's own words, Table 3.12 of its National AQI report: "May cause breathing discomfort to the people with lung disease such as asthma and discomfort to people with heart disease, children and older adults"
- There is no safe level of PM2.5; the WHO guideline exists because risk rises from the first microgram.
- The fine particles pass from the lungs into the blood; the burden falls first on children, the elderly, and those who work outdoors and cannot choose their air.

Ajay Maken

Member of Parliament, Rajya Sabha

What this record holds, page by page

CONTENTS

Re-sectioned 14 August 2026: the same pages, grouped by basis; nothing was removed.

Part A. The verdict, both rulers side by side the paired pages; read these and stop if you must

05	The verdict, weather removed	the page the Government must answer
06	PM2.5 against the WHO	the health benchmark
07	The pollutant board	all tracked species, role-labelled

Part B. Observed: what the monitors said checkable against CPCB, weather and all

08	The day at the stations	the spread the average hides
09	The 30-day path	the index, day by day
10	Against yesterday	the one-day move
11	Against last year, observed	before the weather is removed
12	The worst station	one neighbourhood's day
13	The year so far	the distribution a count and a mean both hide
14	The city over the line	the share of monitors above 200, by year

Part C. Weather removed: the air itself the weather-removed series, its margins, and the weather evidence

15	The weather's hand	six drivers, and the fairness gate
16	The year, weather removed	the sign counts that are the finding
17	PM2.5, month by month	the certified monthly verdicts
18	PM10, month by month	the certified monthly verdicts
19	The weather evidence	climatology, envelope and verdicts

Part D. People, reference and method reach, the full tables, and how it is all made

20	Who the network reaches	coverage at 500 m, 2 km and 4 km
21	Where the people are	the grid, and the Voronoi method in full
22	What each monitor speaks for	people within 4 km, and today's exposure
23	Every station	the full network table
24	Every station, contd.	the full network table
25	Levels: PM2.5 and PM10	thirty days, both lines on one axis
26	Levels: NO2 and NOx	thirty days, both lines on one axis
27	Levels: SO2 and CO	thirty days, both lines on one axis
28	Levels: Ozone	thirty days, both lines on one axis
29	The published context	what pollutes it, what delay costs, and the year
30	The method	plain English, no jargon
31	Sources	every feed, dated and tiered

One fact per page, provable at a glance

Four ways in, depending on the minute you are in



Part A. The verdict, both rulers

01

The summary, then the paired pages: observed and weather removed, side by side.

Pages 01, 02, then 05 onward.

Part B. Observed

02

What the monitors said: the stations, the 30 days, last year, the year so far.

Pages 08 onward.

Part C. Weather removed

03

The air itself: the run, the sign counts, the monthly verdicts, the weather evidence.

Pages 15 onward.

Part D. People, reference, method

04

Who the network reaches, the full tables, and how every number is made.

Pages 20 onward.

What weather removed means. Rain and wind wash or carry pollution away; calm weather traps it. A model removes that effect from the numbers. What remains is the city's own pollution. That is why the Government cannot blame the monsoon for the figures in this record. Think of the two rulers as a thermometer and a feels-like figure: the monitors' reading is the thermometer, weather removed is the air itself. Every data page is tagged OBSERVED, WEATHER REMOVED or BOTH, in the same pale and red the charts use.

What a residual is. One day's level minus the same days of last year. Above zero means worse than last year. It is a difference, never a level.

What the margin is. The band inside which a figure is too close to call. Where a change sits inside its margin, this record says so and rests no claim on it.

The tab

It names the data and the exact window.

The banner

It states the finding, ready to be read out.

The three zones

Reading, caution and a dated source under every chart.

The point

The dark band restates the page's sharpest fact.

The verdict, weather removed

+2

points on last year, weather removed

On its own count the pipeline puts the observed year at +31.8 points; with the weather removed it is still +2 points worse, on the model's count across 30 of 31 stations. 5 of 6 pollutants show no real improvement.

Pollutants with no real improvement on last year



Last year to today, both ways of counting

Last year (grey) to today (colour).

Observed

84 ● ———— ● 116

Weather removed

83 ●● 85

READING

Reading: the top row is the raw index, the bottom row the same comparison after the model removes the weather's hand. The weather flag is down today: the observed and corrected numbers are close enough that neither claims the other's story.

CAUTION

Caution: this page's observed figure (116) is the de-weathering pipeline's own recount, on its own station set and reconstructed baselines, so it can differ from the headline (121). The corrected figure is compared only with the pipeline's own observed, never with the headline.

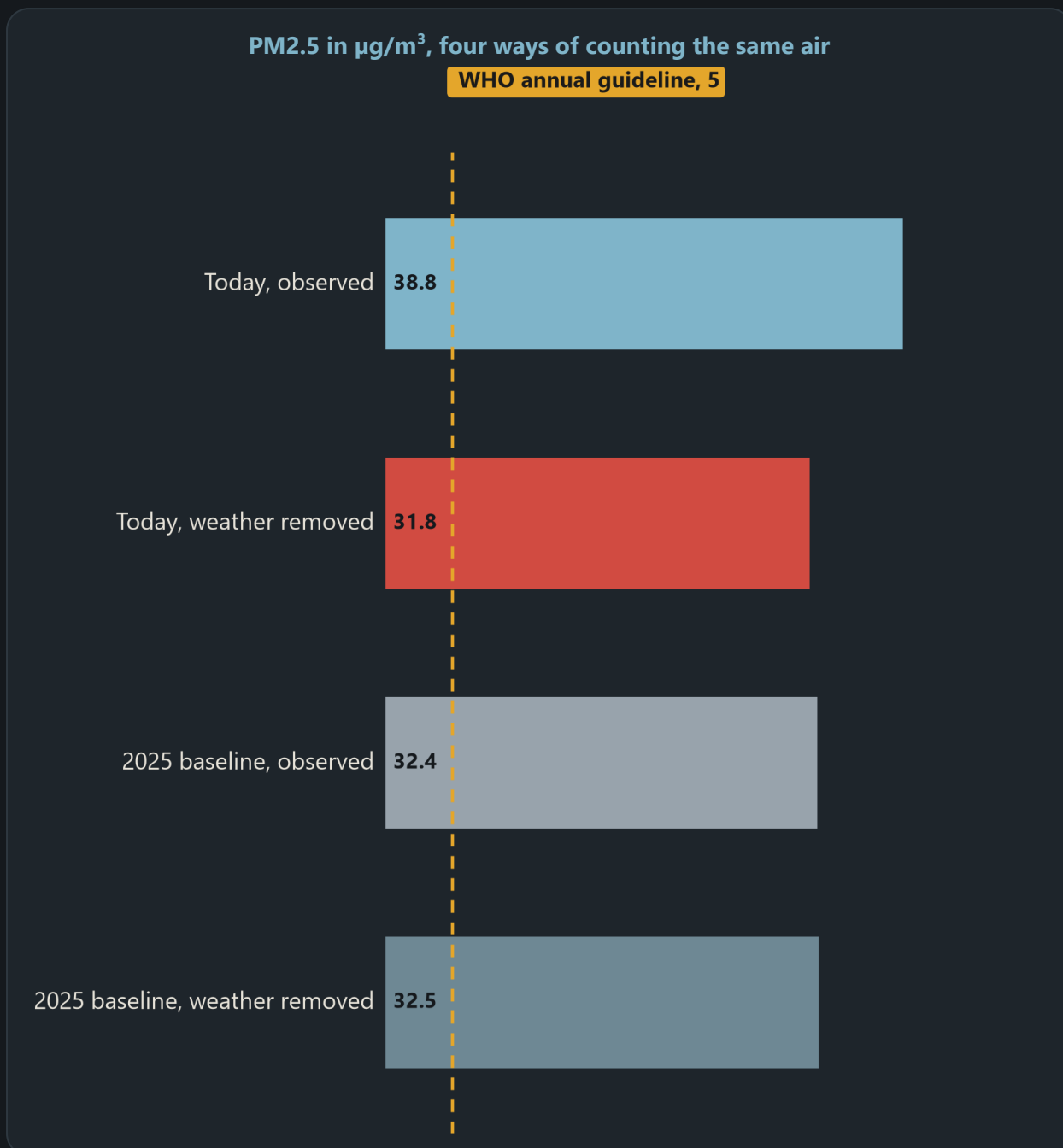
SOURCE

De-weathering pipeline, dw_multipollutant_daily, computed 2026-08-20; weather ERA5 and Open-Meteo [2].

THE POINT

The pipeline's own stations, weather removed: on the model's count the air is 2 points worse than the same days of last year. The monsoon is not a clean-air policy.

PM2.5 against the only health benchmark



READING

Reading: the two upper bars are today, observed and corrected; the grey pair is the same date last year. The dashed line is the WHO annual guideline of $5 \mu\text{g}/\text{m}^3$.

CAUTION

Caution: On days it has never seen, the weather model explains about 38 per cent of the variation, so corrected figures are estimates, not exact points.

SOURCE

De-weathering pipeline, `dw_multipollutant_daily`, computed 2026-08-20; weather ERA5 and Open-Meteo [2].

THE POINT

Even on a monsoon-washed day, Delhi's PM2.5 of $38.8 \mu\text{g}/\text{m}^3$ runs about 8 times the WHO annual guideline. There is no safe level of PM2.5.

Every pollutant, observed and weather removed

Pollutant	Today obs	Weather removed	Obs YoY	YoY, weather removed [range]	Skill	Role in claims
PM2.5	38.8	31.8	+24.1%	-1.4% [-2 to -0.7]	38%	Claims-eligible
PM10	112.5	84.4	+50.4%	+3.6% [2.7 to 4.7]	36%	Claims-eligible
NO2	24.8	25	-23.2%	-9.9% [-20.7 to 4.3]	26%	Claims-eligible
NOx	19.7	24	-25.4%	+0.5% [-9 to 13.3] (not usable)	35%	Observed context only
SO2	11.9	11.2	+31.4%	+10.6% [1.2 to 21.5] (not usable)	11%	Observed context only
CO	1167.4	1214.6	+7.3%	+24.4% [11 to 44.9] (not usable)	27%	Observed context only
Ozone	33.4	34.7	-19%	+3.5% [-1.8 to 8.1] (not usable)	36%	Observed only, never a claim

45 of 45

Stations still above the WHO 24-hour limit for PM2.5 (15 µg/m³) after weather correction.

45 of 45

Stations still above the WHO 24-hour limit for PM10 (45 µg/m³) after weather correction.

1.9x

Delhi's weather-corrected PM10 against the same WHO 24-hour limit.

How much of each pollutant's day-to-day swing the weather model explains



READING

Reading: every pollutant we track, observed AND weather removed, including the ones we deliberately never build claims on. Concentrations are µg/m³, except NOx, which the monitors report in ppb. A range spanning zero is too close to call. The bars draw the Skill column, red where a de-weathered claim is allowed and grey where it is not.

CAUTION

Caution: skill is the share of variation the model explains on days it has never seen. Ozone is permanently excluded from claims: it rises when traffic NO2 falls, so citing it could be spun as transport improved. Weak-model gases carry observed facts only, and Ozone's high skill is why the bars alone do not decide the roster.

SOURCE

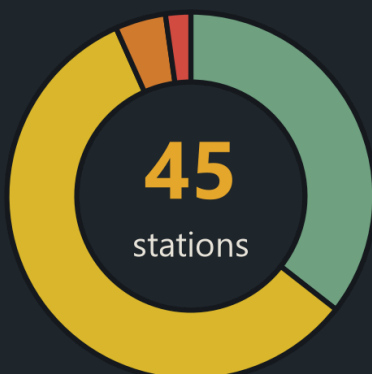
De-weathering pipeline, dw_multipollutant_daily, computed 2026-08-20; weather ERA5 and Open-Meteo [2].

THE POINT

5 of 6 pollutants show no real improvement on last year once the weather is removed.

One average, and the spread it hides

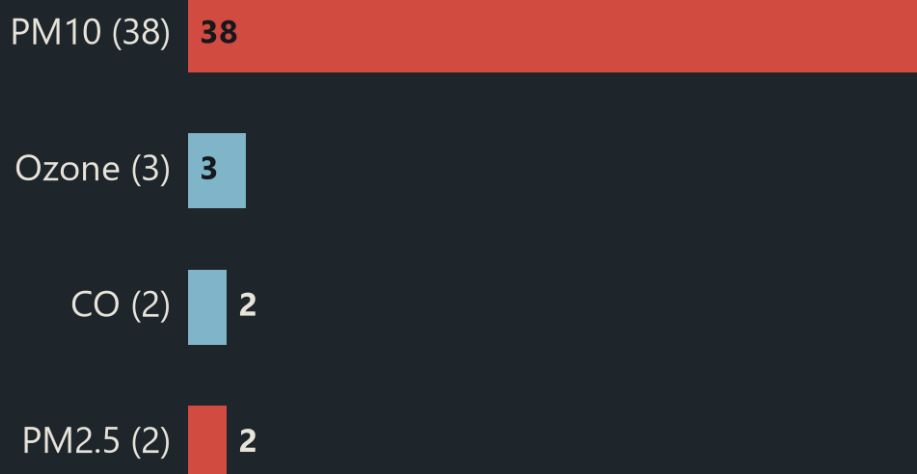
All 45 stations, by category



The same count, category by category



Which pollutant set each station's figure today



READING

Reading: each station reports its own AQI; the wheel and the bars are the same 45 stations counted by category. The lower panel counts the same stations by the pollutant that set each one's figure. Zero counts are printed as zeros.

CAUTION

Caution: the city headline is the mean of station AQIs, so one bad station can sit inside a Satisfactory average. A station's leading pollutant is the worst of its own sub-indices, not a ranking of how much of each was in the air.

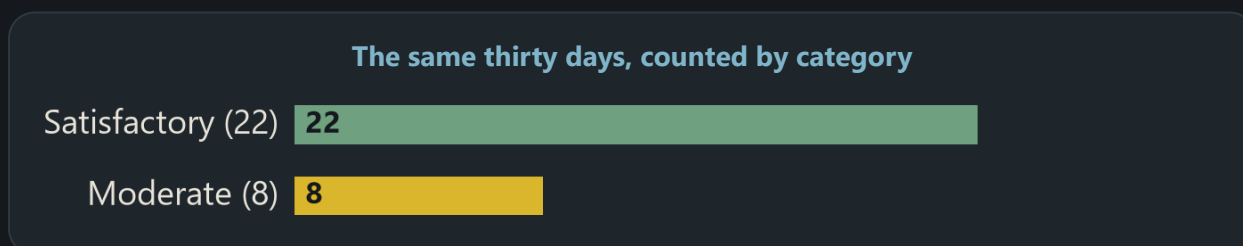
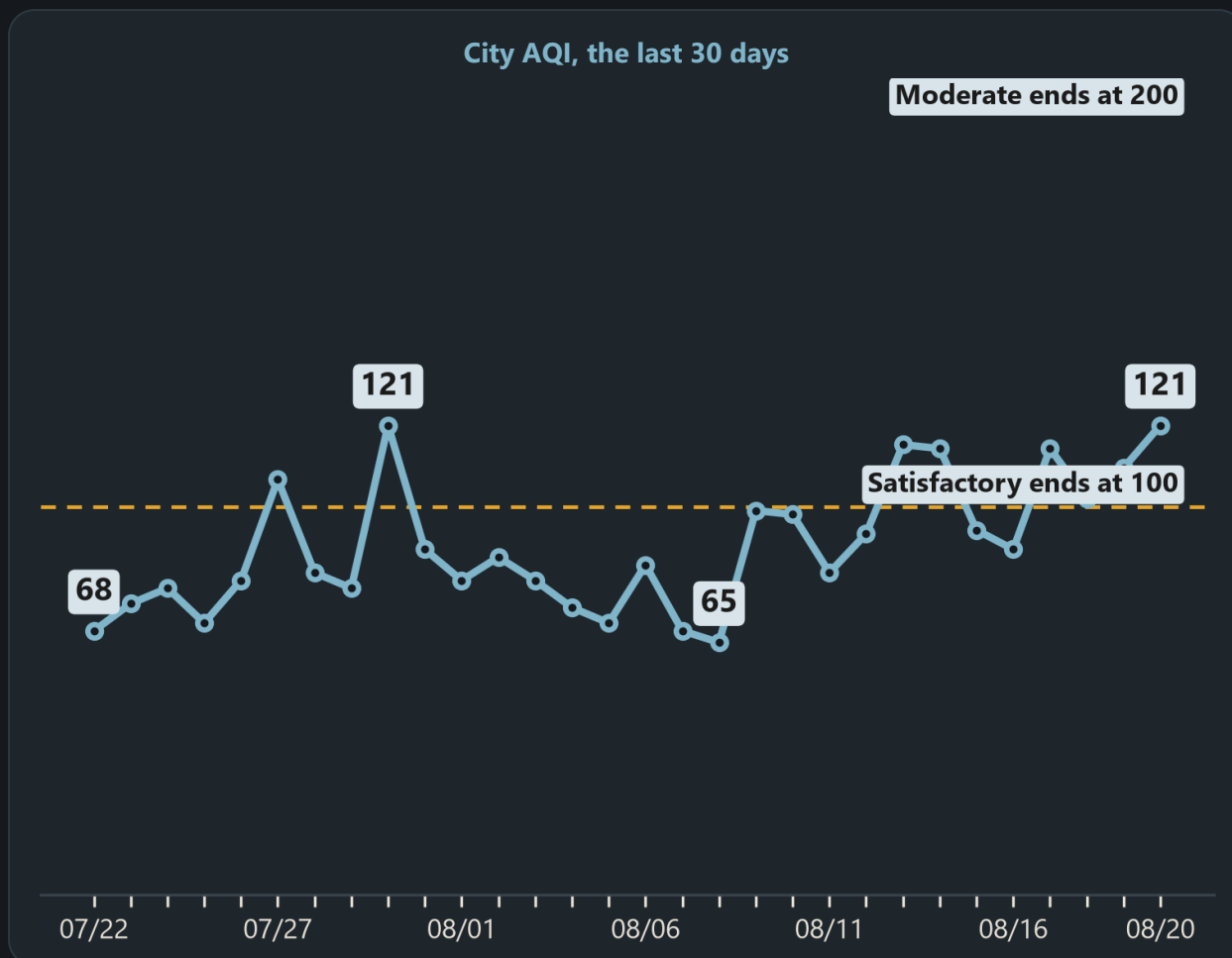
SOURCE

CPCB station data via the daily narration feed, generated 2026-08-20; CPCB 2014 sub-index formula, city figure the mean of station AQIs [1].

THE POINT

Anand Vihar, Delhi - DPCC read 297, Poor, on PM2.5, on a day the city average read Moderate.

Thirty days of the monsoon-washed index



READING

Reading: the line is the city mean of station AQIs, one point per day. The dashed lines are the CPCB category boundaries. The lower panel counts the same thirty days by the category each one fell in.

CAUTION

Caution: the window is 24h ending 10 AM IST (aligned to daily $\mu\text{g}/\text{m}^3$ + de-weather); NOT CPCB's published calendar-day AQI, not the calendar day, so this line and a midnight series will differ.

SOURCE

CPCB station data via the daily narration feed, generated 2026-08-20; CPCB 2014 sub-index formula, city figure the mean of station AQIs [1].

THE POINT

Thirty days ago the city read 68. Today it reads 121. The monsoon is doing the cleaning it does every year.

Against yesterday: the one-day move

11.3

points on yesterday

From 110 to 121. The 95 per cent interval runs 4.5 to 20.5 points, on 45 matched stations.

Yesterday to today

Yesterday (grey) to today (colour).

City AQI

110 ● — ● 121

Which way each matched station moved since yesterday

Worse than yesterday (35) **35**

Better than yesterday (8) **8**

No change (2) **2**

READING

Reading: the grey dot is yesterday, the coloured dot today; red marks a worsening. The lower panel splits the same matched stations by which way each one moved.

CAUTION

Caution: a one-day move is weather before it is policy. The year pages carry the argument.

SOURCE

CPCB station data via the daily narration feed, generated 2026-08-20; CPCB 2014 sub-index formula, city figure the mean of station AQIs [1].

THE POINT

One day proves nothing on its own; the year-on-year and weather-removed pages carry the argument.

Against last year: the observed reading

37.5

points on last year, observed

Today 121 across 45 stations. The year is judged on the 37 matched stations: 127 today against 90, the mean of the same date ± 7 days of 2025 at those stations. The interval runs 23.4 to 54.1 points.

The station split behind the average

Stations worse than last year (33) 33

Stations better (4) 4

How the 37 matched stations moved vs last year, in AQI points

Better, fell (4) 4

Up 0 to 100 points (30) 30

Up 100 to 200 points (2) 2

Up 200 points or more (1) 1

READING

Reading: the observed year-on-year change, on the feed's own canonical figure. The lower panel sizes the moves behind that one number, station by station.

CAUTION

Caution: the median worsening is 29.9 points and the median improvement -6, so the average hides both. Weighted by population, today reads 124 against 91 last year.

SOURCE

CPCB station data via the daily narration feed, generated 2026-08-20; CPCB 2014 sub-index formula, city figure the mean of station AQIs [1].

THE POINT

The observed year reads worse before any correction. The verdict figure is the weather-removed one, +2 points, on page 05.

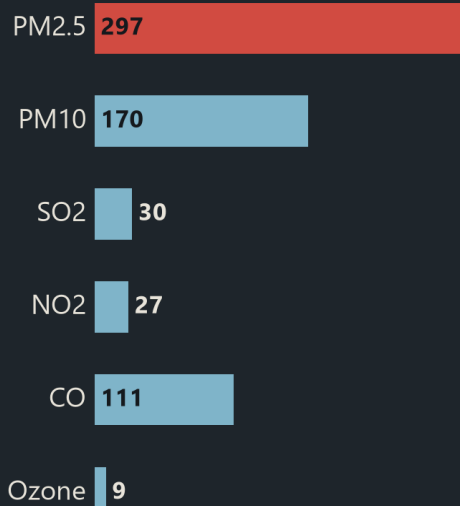
The worst station in the city today

297

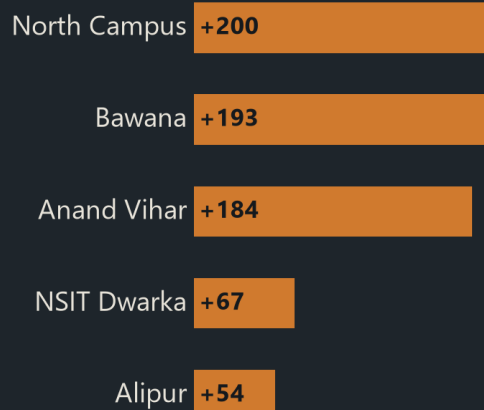
Anand Vihar, Delhi - DPCC

Poor, on PM2.5. Last year this station read 115 on the ± 7 -day mean around this date; the change is 182 points. Within 500 m of the monitor, 84% of the land is built up and 14% is under vegetation, so this reading describes a densely built neighbourhood.

The station's six sub-indices



Stations that worsened most vs last year



READING

Reading: a station's AQI is its WORST pollutant's sub-index; the red bar set today's figure. The lower panel lists the stations most above last year, in points.

CAUTION

Caution: one station is one neighbourhood, and a single-pollutant spike can be an instrument artefact; the sub-indices are printed so the claim can be checked. The land around a monitor decides how far its reading travels, which is why it is stated below the figure.

SOURCE

CPCB station data via the daily narration feed, generated 2026-08-20; CPCB 2014 sub-index formula, city figure the mean of station AQIs [1]. Land cover from ESA WorldCover 2021 v200, 10 m, CC BY 4.0.

THE POINT

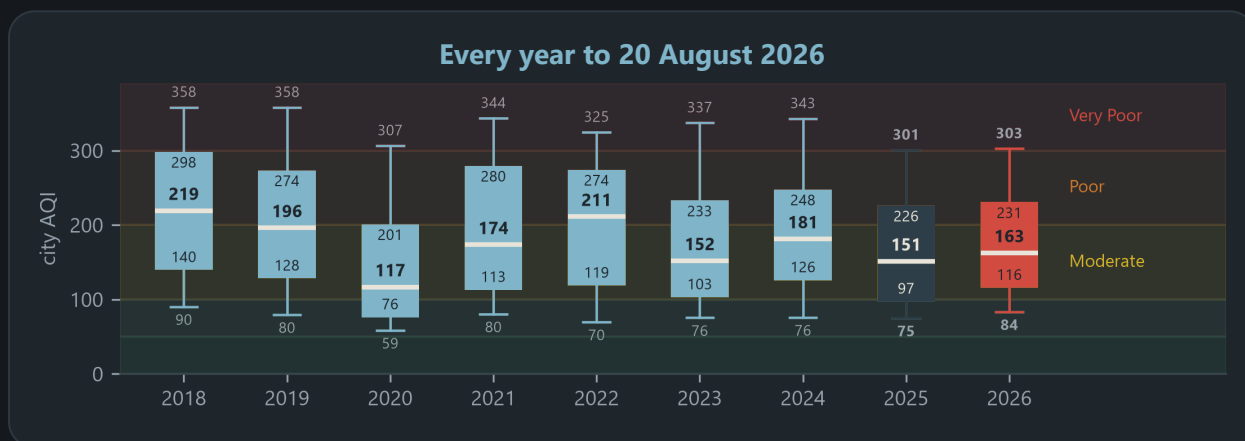
While the city averaged Moderate, Anand Vihar, Delhi - DPCC sat at 297. An average is not an experience.

The year, from its best days to its worst

163

**the middle day of 2026 so far,
against 151 last year**

On the same 231 dates the best tenth of days reads 84 against 75, and the worst tenth 303 against 301. Each is unchanged inside its margin, and the days at or below 200 went from 152 to 153.



READING

Reading: the box holds the middle half of that year's days, the white rule inside it is the middle day, and the whiskers reach its best and worst tenth. The bands behind are the CPCB categories, so a year that improved would slide the whole box down through them.

CAUTION

Caution: the whiskers are the tenth and ninetieth percentiles, not the extremes, so each year's worst days lie above them. These are the 231 dates present in every year, and a change whose interval spans zero is unchanged, never proven better or worse. Only the lower quarter clears that test, at +18 on +1 to +32, and only just.

SOURCE

Computed from the CREA compilation of the CPCB hourly record, CPCB 2014 sub-index, calendar day, city figure the mean of station AQIs; PM basis, the higher of the PM2.5 and PM10 sub-indices [1].
CPCB_AQI_Analysis/clean_air_days_window.R.

THE POINT

The dirty half of the year did not move, its upper quarter standing at 231 against 226. The one measure that did move is the lower quarter, 97 to 116, so the cleaner days got dirtier

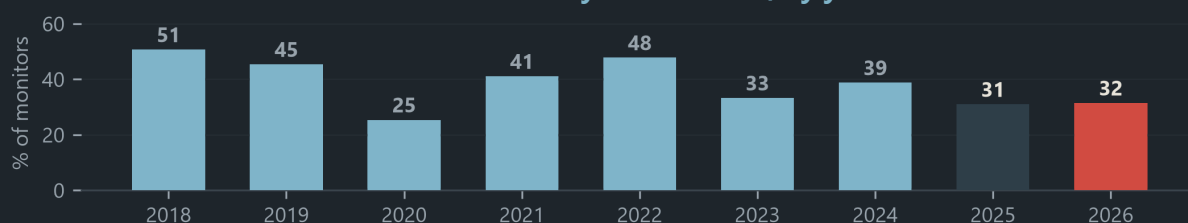
How much of the city was above AQI 200

32%

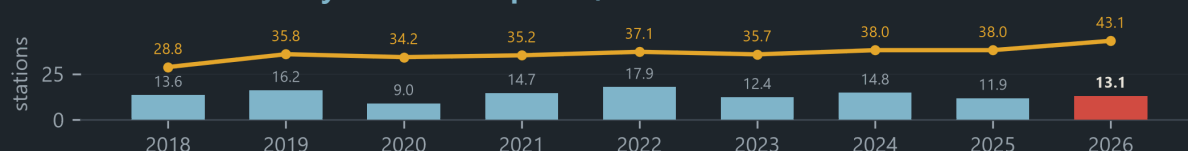
of Delhi's monitors above AQI 200 on an average day

That is 13.1 of 43.1 reporting stations, against 31 per cent over the same dates last year, a change of +0.5 points on an interval of -3.2 to +4.2, so it is unchanged inside its margin.

The share of the city over the line, by year



Why the share is quoted, and never the raw count



READING

Reading: the upper bar is the share of Delhi's own reporting monitors that read above AQI 200 on an average day of that year, so it asks how much of the city was over the line rather than how the city average behaved. Beneath it the amber line counts the monitors reporting at all, and the bars count how many of those read above 200.

CAUTION

Caution: the share is quoted and never the raw count, because the reporting network grew from 28 stations to 43 across this record, and a rising count of stations over 200 could mean nothing more than a growing network. It is measured on each day against that day's own reporting stations and then averaged, so it is not exactly the one line below divided by the other.

SOURCE

Computed from the CREA compilation of the CPCB hourly record, CPCB 2014 sub-index, calendar day, city figure the mean of station AQIs; PM basis, the higher of the PM2.5 and PM10 sub-indices [1].
CPCB_AQI_Analysis/clean_air_days_window.R.

THE POINT

Nobody breathes the city average. On an average day this year 32 per cent of Delhi's monitors sat above 200.

The weather's hand, driver by driver

7.2 km/h

Wind speed today; last year 8.8 km/h.

$z = -0.44$

0.6 mm

Rain today; last year 5.7 mm.

$z = 0.74$

400.4 m

Mixing height today; last year 439.8 m.

$z = -1.07$

30.7 °C

Temperature today; last year 29.4 °C.

$z = -2.14$

GATED OUT

no data

Inversion today; last year 0.3 °C.

$z = -1.09$

307 deg

Wind direction today; last year 103 deg.

$z = \text{no data}$

How far last year's baseline sat from normal, in standard deviations

Wind speed ($z = -0.44$) **0.44**

Rain ($z = 0.74$) **0.74**

Mixing height ($z = -1.07$) **1.07**

Temperature ($z = -2.14$) **2.14**

Inversion ($z = -1.09$) **1.09**

READING

Reading: each tile is one weather driver, today against the same date last year. The z value is how far last year's baseline sat from the 2021 to 2024 normal. The chart draws those same z values as distances, so the gated drivers can be seen rather than counted.

CAUTION

Caution: a driver whose baseline was itself abnormal is greyed and marked. Last year's baseline was abnormal for temperature, so no argument rests on it. The bars carry no threshold line: the gate is the feed's own verdict, printed on each bar, not a cut-off this page invents.

SOURCE

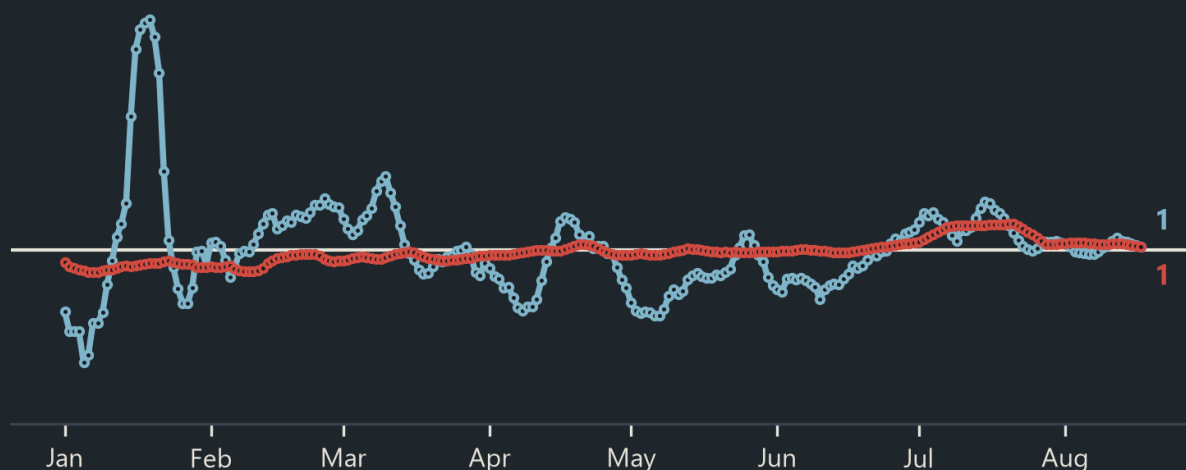
De-weathering pipeline, `dw_multipollutant_daily`, computed 2026-08-20; weather ERA5 and Open-Meteo [2].

THE POINT

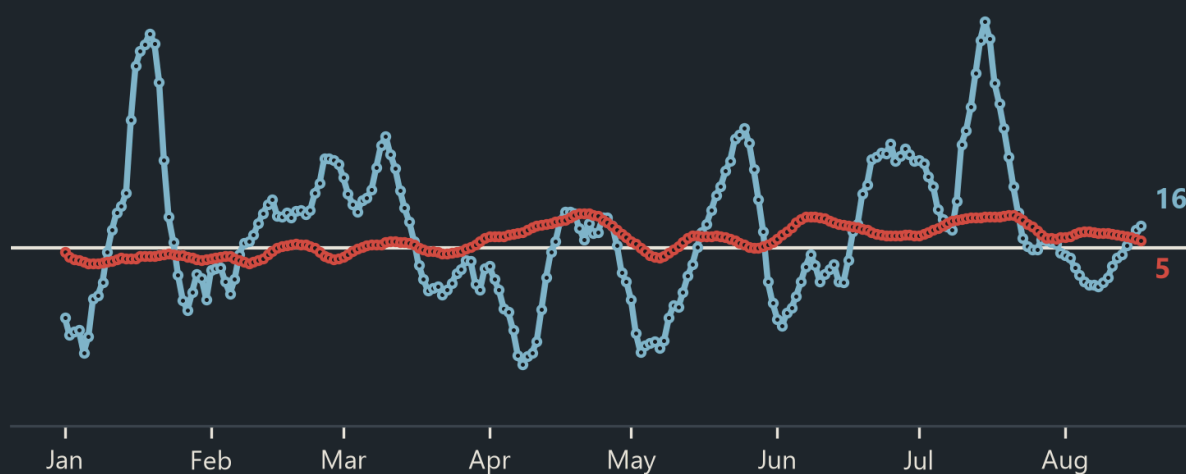
Wind today is 7.2 km/h against 8.8 on the same date last year. Ventilation, not policy, is moving the raw numbers.

Weather removed, PM10 sat above last year on 159 of 232 days, PM2.5 on 86

PM2.5 residual, 2026



PM10 residual, 2026



READING

Reading: a residual is this year's level minus the same ± 7 days of 2025. The pale line is the observed residual, weather included. The red line is the weather-removed residual, the change the city's own pollution produced. Above the zero line means worse than last year.

CAUTION

Caution: single-vintage reconstruction with live-archive fallback; 7-day centered average, so the last 3 days are suppressed; days under 30 stations or 15 matched are dropped (232 usable). The model is refit weekly, trained through 2026-08-15.

SOURCE

De-weathering pipeline, `dw_multipollutant_daily`, computed 2026-08-20; weather ERA5 and Open-Meteo [2].

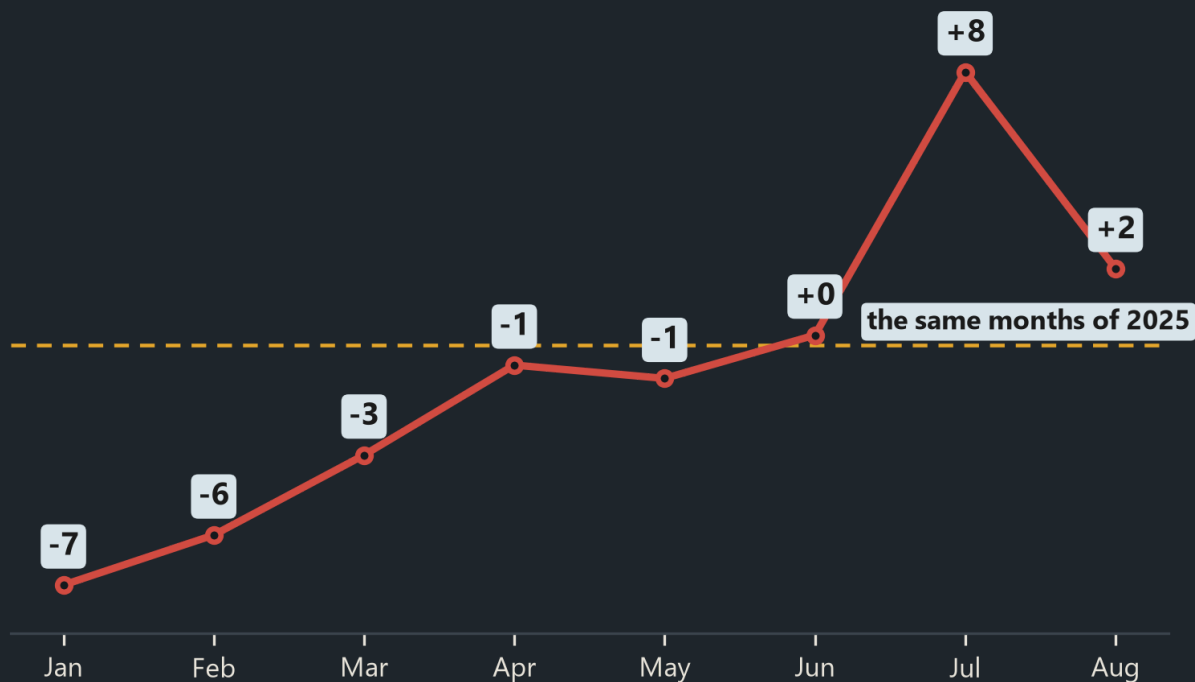
THE POINT

The sign counts are the finding: PM10 above last year on 159 of 232 days, PM2.5 on 86 of 232. A sign does not depend on the margin.

PM2.5, month by month, weather removed

-7January: directional;
margin ± 11 , 31 days.**-6**February: directional;
margin ± 11 , 28 days.**-3**March: within the margin;
margin ± 10 , 31 days.**-1**April: within the margin;
margin ± 10 , 30 days.**-1**May: within the margin;
margin ± 10 , 31 days.**+0**June: within the margin;
margin ± 10 , 30 days.**+8**July: directional; margin
 ± 10 , 31 days.**+2**August so far: within the
margin; margin ± 10 , 20
days.

PM2.5 monthly mean residual, $\mu\text{g}/\text{m}^3$ against 2025



READING

Reading: each tile is one month's MEAN of the raw daily weather-removed residuals for PM2.5, in $\mu\text{g}/\text{m}^3$ above or below the same days of 2025. Red is worse than last year, green better, grey within the margin. The chart is the same twelve figures in order, so the year's shape can be seen rather than assembled from tiles.

CAUTION

Caution: the margin divides an hourly model error by a station count, and the statistician panel has struck that construction in both directions. It is quoted, never load-bearing; the sign counts do not depend on it.

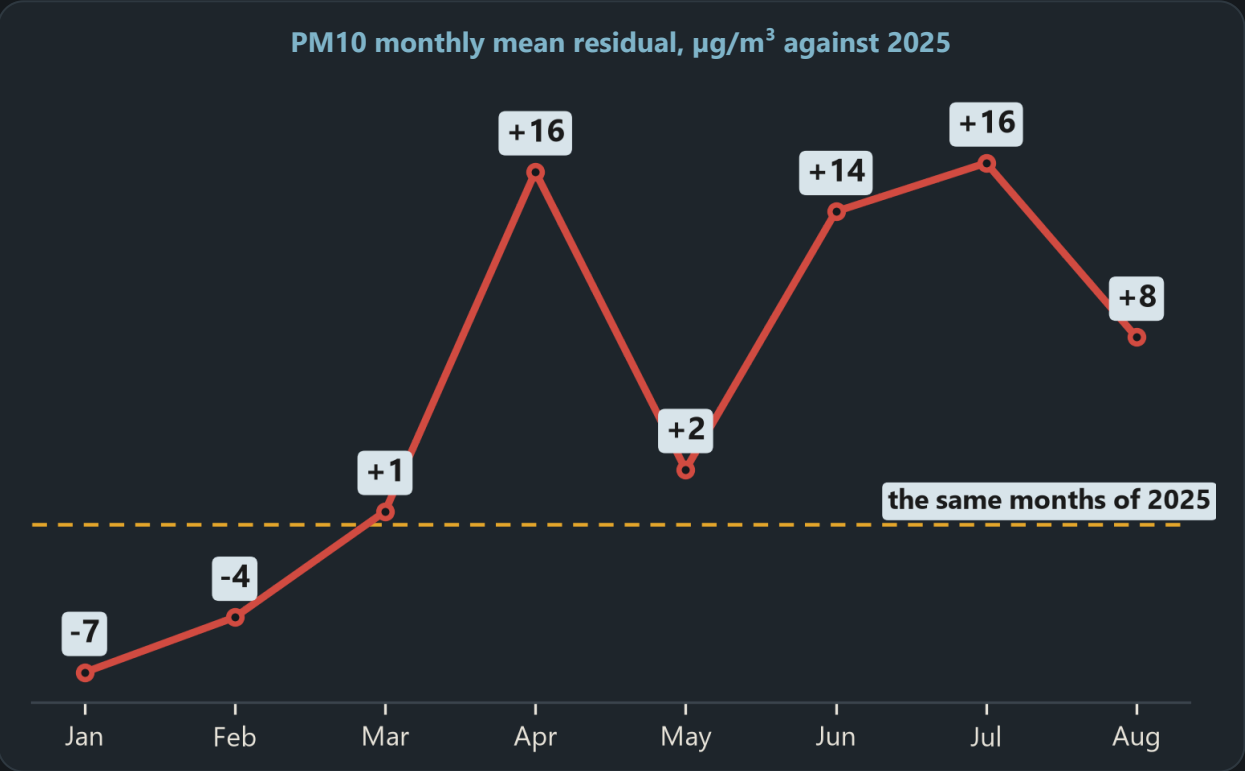
SOURCE

De-weathering pipeline, dw_multipollutant_daily, computed 2026-08-20; weather ERA5 and Open-Meteo [2].

THE POINT

PM2.5: 3 of 8 months sat above last year on the weather-removed residual, 5 below.

PM10, month by month, weather removed



READING Reading: each tile is one month's MEAN of the raw daily weather-removed residuals for PM10, in $\mu\text{g}/\text{m}^3$ above or below the same days of 2025. Red is worse than last year, green better, grey within the margin. The chart is the same twelve figures in order, so the year's shape can be seen rather than assembled from tiles.

CAUTION Caution: the margin divides an hourly model error by a station count, and the statistician panel has struck that construction in both directions. It is quoted, never load-bearing; the sign counts do not depend on it.

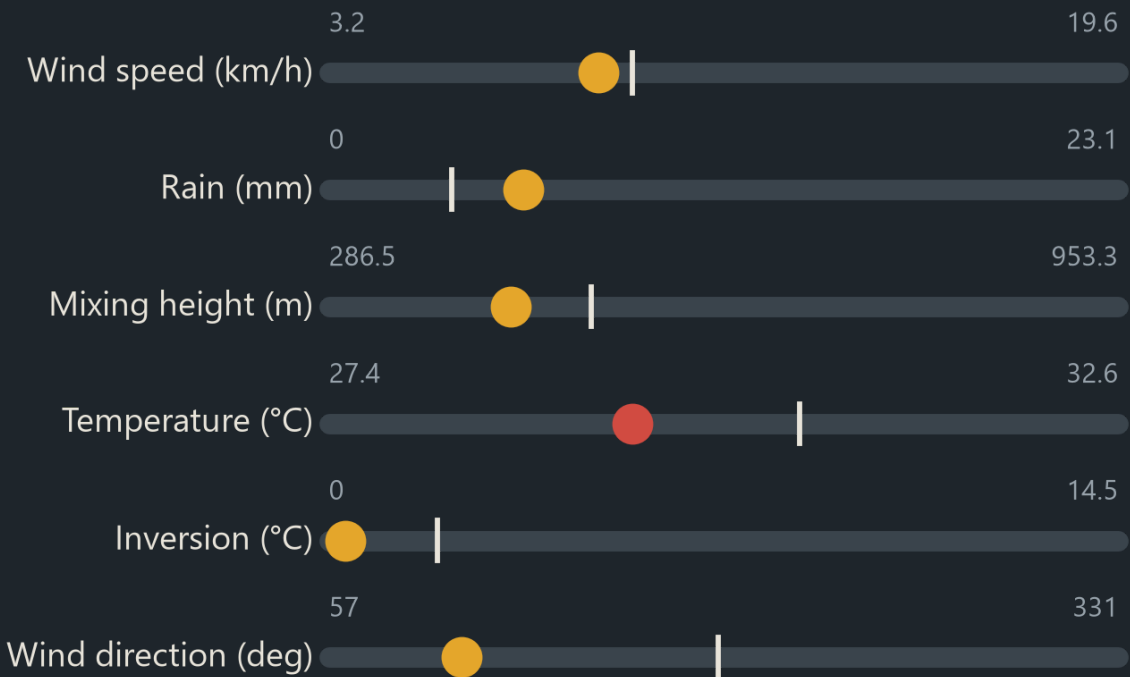
SOURCE De-weathering pipeline, dw_multipollutant_daily, computed 2026-08-20; weather ERA5 and Open-Meteo [2].

THE POINT
PM10: 6 of 8 months sat above last year on the weather-removed residual, 2 below.

The full weather evidence, with its climatology

Driver	Today	Last yr	Normal	SD	p1	p99	z	Verdict
Wind speed (km/h)	7.2	8.8	9.5	1.5	3.2	19.6	-0.44	normal
Rain (mm)	0.6	5.7	3.6	2.8	0	23.1	0.74	normal
Mixing height (m)	400.4	439.8	508.1	64	286.5	953.3	-1.07	normal
Temperature (°C)	30.7	29.4	30.5	0.5	27.4	32.6	-2.14	abnormal, gated out
Inversion (°C)	no data	0.3	2	1.6	0	14.5	-1.09	normal
Wind direction (deg)	307	103	192	20	57	331	no data	no data

Where last year's baseline sat inside four years of history



READING Reading: the full fairness evidence behind the driver tiles. Normal, SD and the p1 to p99 envelope come from the 2021 to 2024 history for these same calendar days. Each bar below is one driver's own envelope, from p1 at the left to p99 at the right, with a tick at the normal and a dot where last year's baseline sat. A red dot is a baseline the check ruled abnormal.

CAUTION Caution: the check runs in either direction. A driver ruled abnormal is gated out whether it would help our argument or hurt it. Each bar has its own scale and its own unit, so a dot's position compares a driver with its own history and never with another driver.

SOURCE De-weathering pipeline, dw_multipollutant_daily, computed 2026-08-20; weather ERA5 and Open-Meteo [2].

THE POINT

Before any weather driver is cited, last year's baseline is checked against four years of history. A freakish baseline is refused.

Who the monitoring network reaches

2.3 km

from the typical resident to the nearest monitor

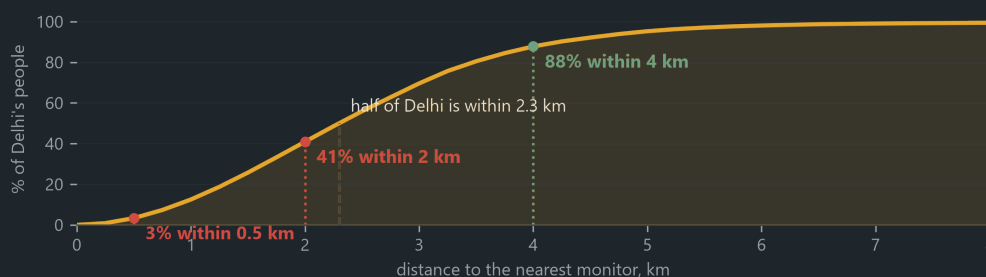
Within 4 km live 88 per cent of Delhi's people, within 2 km 41 per cent, and within 500 m only 3.3 per cent. India's own rules ask for about 46 particulate monitors, because IS 5182 scales the count to population, and Delhi has 44. So the count test passes, while 29 of the 44 zones still stretch past 4 km, which is as far as a monitor is held to speak.

The network on the map

44 monitors, and the 2 km around each



How far Delhi lives from its nearest monitor



READING

Reading: the curve is the distance from a Delhi resident to their nearest monitor, counted over every person in the city. The three marked points are the shares within 500 m, 2 km and 4 km, so they are readings of one curve rather than three separate facts.

CAUTION

Caution: living near a monitor is not protection. This says how far the network can speak, and nothing about the air itself. Monitors just outside Delhi are excluded here, and counting them would add about 1.6 points at 4 km.

SOURCE

Population shape from WorldPop India, constrained and UN-adjusted, 2020, 100 m, CC BY 4.0. The level comes from the Election Commission 2025 Delhi roll, scaled to the Registrar General's 2025 projection of 20.94 million. The radii are the US EPA neighborhood scale, set in 40 CFR 58 App D s1.2. Method after Manoj Kumar, "604 air quality stations. But how well do they represent India?", India Air Quality & Energy Insights, 11 August 2026.

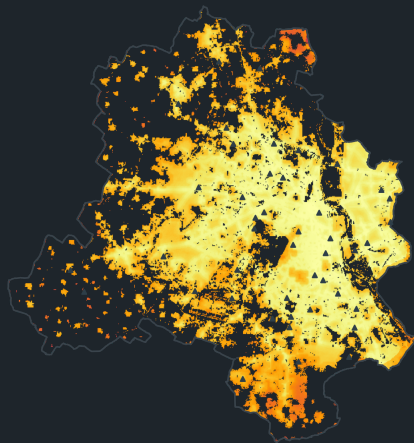
THE POINT

Delhi has the monitors the rules require. Even so, 2.6 million Delhi residents live beyond 4 km of any monitor, which is further than one is held to speak.

Where Delhi's people are, and how the zones are drawn

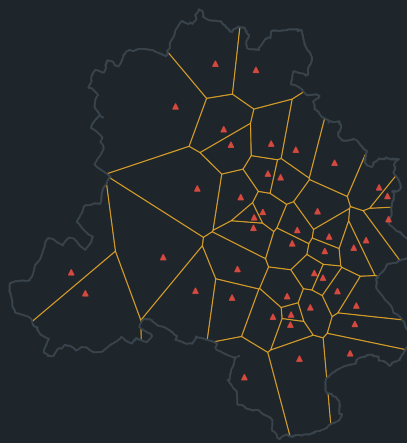
Where the people are

People per 100 m cell, brighter is denser



The zones those people fall in

The 44 zones, tiling Delhi exactly



The Voronoi method, in full

What a Voronoi zone is

Draw a line halfway between each pair of neighbouring monitors. Those lines cut the city into one patch per monitor. Every point in a patch sits nearest that monitor. The patches meet with no gaps and no overlaps, so together they cover Delhi exactly once.

Why the zones differ in size

A monitor in central Delhi has close neighbours on every side, so its zone comes out small. A monitor on the outskirts has few neighbours, so its zone is large. Zone size therefore measures how thinly the network is spread, and not how dirty the air is.

How a zone becomes a weight

The grid counts the people inside each zone. That share then becomes the monitor's weight. A monitor speaking for a tenth of Delhi counts for a tenth, where once it counted the same as one speaking for a fiftieth.

What it corrects, and what it cannot

Monitor density is not population density, and this corrects for that. It cannot correct where a monitor sits inside its zone, nor the weather that day. It corrects a city average, so it is never an estimate of what one person breathed.

READING

Reading: the left map is the population grid, one cell per 100 m, and brighter means denser. The right map cuts Delhi into one zone per monitor, so every point belongs to its nearest one.

CAUTION

Caution: the grid is a model, not a census. It places people where satellites see buildings. How many it places comes from our 2025 electoral roll, because India has had no census since 2011.

SOURCE

Population shape from WorldPop India, constrained and UN-adjusted, 2020, 100 m, CC BY 4.0. The level comes from the Election Commission 2025 Delhi roll, scaled to the Registrar General's 2025 projection of 20.94 million. The radii are the US EPA neighborhood scale, set in 40 CFR 58 App D s1.2. Method after Manoj Kumar, "604 air quality stations. But how well do they represent India?", India Air Quality & Energy Insights, 11 August 2026.

THE POINT

A city average is honest only when each monitor is weighted by the people it speaks for. These zones are how that weight is worked out.

What each monitor's reading speaks for

1.63M

live within 4 km of a Poor monitor today

That is 7.8 per cent of Delhi, living around the 2 monitors that read Poor or worse. Anand Vihar was worst at 297, and 1,363,291 people live within 4 km of it. On the wider count, 82 per cent live within 4 km of a monitor at Moderate or worse.

Today, Poor or worse

Anand Vihar **297 · 1.36M**

Bawana **271 · 0.27M**

AQI, then people within 4 km. These circles overlap, so the figures do not add.

Station	Within 4 km	Reach km	Avg km
IHBAS, Dilshad Garden	2.08M	4.2	2.2
Mundka	1.83M	11.9	3.0
North Campus, DU	1.59M	3.3	1.6
Punjabi Bagh	1.58M	5.0	2.1
Vivek Vihar	1.57M	2.9	1.1
Shadipur	1.52M	3.3	1.4
Sonia Vihar	1.48M	5.1	2.6
Okhla Phase-2	1.46M	7.3	2.6
Patparganj	1.44M	5.2	2.4
Wazirpur	1.41M	3.3	1.6
Anand Vihar	1.36M	5.3	2.6
NSIT Dwarka	1.33M	11.2	3.3
Chandni Chowk	1.32M	4.2	2.1
Ashok Vihar	1.32M	3.6	1.9
Mandir Marg	1.25M	3.4	1.7
Pusa	1.23M	5.6	2.6
Rohini	1.21M	4.2	2.1
Jahangirpuri	1.19M	5.3	2.0
CRRJ Mathura Road	1.19M	5.0	1.8
Commonwealth Sports Compl	1.15M	4.6	1.8
Dr. Karni Singh Shooting	1.06M	8.5	3.0
ITO	0.96M	3.9	1.4

READING

Reading: each row gives the people living within 4 km of that monitor, then how far its zone reaches, then how far its average resident sits. US rules treat 4 km as the furthest a PM2.5 monitor can speak. The large figure is today's, so it moves with the pollution and not with the map.

CAUTION

Caution: these circles overlap, heavily at 4 km. Added up they return about twice Delhi's population, so read the column one monitor at a time. It has no valid total. Living within 4 km is not the same as breathing that exact reading.

SOURCE

Population shape from WorldPop India, constrained and UN-adjusted, 2020, 100 m, CC BY 4.0. The level comes from the Election Commission 2025 Delhi roll, scaled to the Registrar General's 2025 projection of 20.94 million. The radii are the US EPA neighborhood scale, set in 40 CFR 58 App D s1.2. Method after Manoj Kumar, "604 air quality stations. But how well do they represent India?", India Air Quality & Energy Insights, 11 August 2026.

THE POINT

A reading is not an abstraction. Today Anand Vihar read 297, and that is the air of the 1,363,291 people who live within 4 km of it.

Every reporting station

#	Station	AQI	Category	Main pollutant
1	North Campus	311	Very Poor	Ozone
2	Anand Vihar	297	Poor	PM2.5
3	Bawana	271	Poor	PM2.5
4	Wazirpur	159	Moderate	PM10
5	Jahangirpuri	146	Moderate	PM10
6	Pusa	140	Moderate	Ozone
7	Dwarka-Sector 8	136	Moderate	PM10
8	IIT Delhi	133	Moderate	PM10
9	R K Puram	130	Moderate	PM10
10	Rohini	126	Moderate	PM10
11	Chandni Chowk	126	Moderate	PM10
12	NSIT Dwarka	124	Moderate	CO
13	Sirifort	124	Moderate	PM10
14	Pusa	124	Moderate	PM10
15	IGI Airport (T3)	121	Moderate	Ozone
16	Nehru Nagar	120	Moderate	PM10
17	Ashok Vihar	117	Moderate	PM10
18	CRRI Mathura Road	116	Moderate	PM10
19	Punjabi Bagh	115	Moderate	PM10
20	Sonia Vihar	115	Moderate	PM10
21	Vivek Vihar	115	Moderate	PM10
22	Alipur	112	Moderate	PM10
23	ITO	110	Moderate	PM10

READING

Reading: all 45 stations that reported in today's window, worst first. A station's AQI is the CPCB bulletin method, the worst pollutant sub-index at that station.

CAUTION

Caution: a monitor speaks for its own neighbourhood, not for the city. The network is not identical from day to day, because stations report on different schedules.

SOURCE

CPCB station data via the daily narration feed, generated 2026-08-20; CPCB 2014 sub-index formula, city figure the mean of station AQIs [1].

THE POINT

Not one of the 23 stations on this page was rated Good. The worst here is North Campus at 311.

Every reporting station, continued

#	Station	AQI	Category	Main pollutant
24	Mandir Marg	109	Moderate	PM10
25	Okhla Phase-2	109	Moderate	PM10
26	Patparganj	109	Moderate	PM10
27	Jawaharlal Nehru Stadium	105	Moderate	PM10
28	Mundka	104	Moderate	PM10
29	Dr. Karni Singh Shooting Range	102	Moderate	PM10
30	Burari Crossing	99	Satisfactory	PM10
31	IMD Lodhi Road	99	Satisfactory	PM10
32	Major Dhyan Chand National Stadium	98	Satisfactory	PM10
33	Narela	98	Satisfactory	PM10
34	Cantonment Area	98	Satisfactory	CO
35	Sri Aurobindo Marg	95	Satisfactory	PM10
36	Najafgarh	91	Satisfactory	PM10
37	Aya Nagar	89	Satisfactory	PM10
38	Commonwealth Sports Complex	89	Satisfactory	PM10
39	IHBAS	88	Satisfactory	PM10
40	NSUT Jaffarpur	83	Satisfactory	PM10
41	JNU	82	Satisfactory	PM10
42	DTU	81	Satisfactory	PM10
43	Shadipur	80	Satisfactory	PM10
44	IGNOU_Maidan Garhi	80	Satisfactory	PM10
45	Talkatora Garden	79	Satisfactory	PM10

READING

Reading: the table continues, same window, same method, worst first.

CAUTION

Caution: a monitor speaks for its own neighbourhood, not for the city. The network is not identical from day to day, because stations report on different schedules.

SOURCE

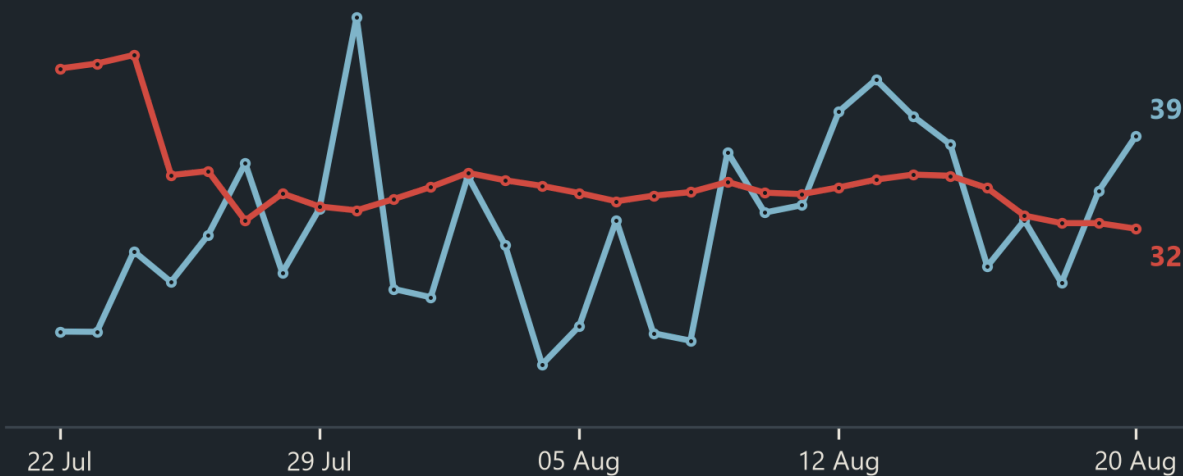
CPCB station data via the daily narration feed, generated 2026-08-20; CPCB 2014 sub-index formula, city figure the mean of station AQIs [1].

THE POINT

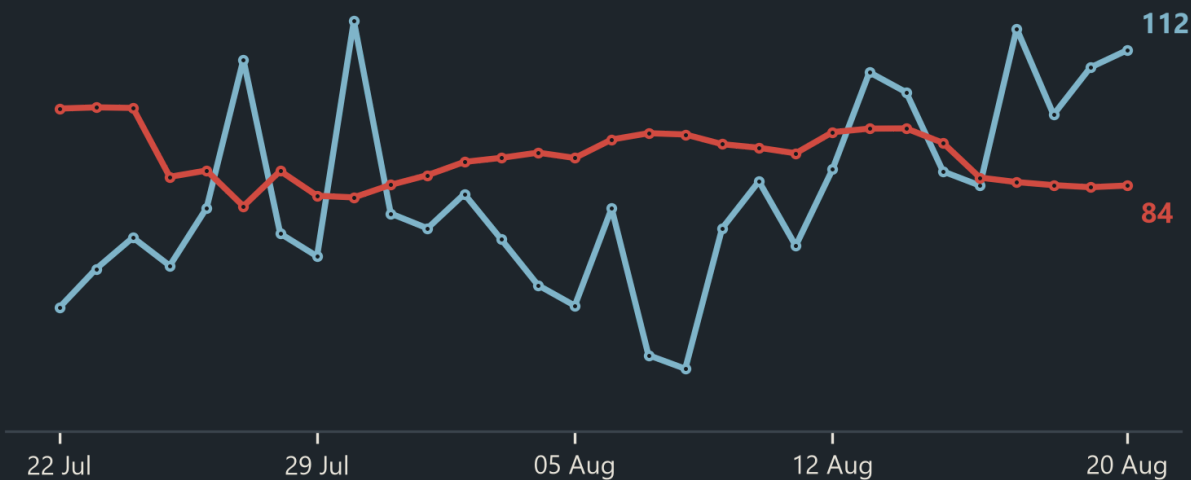
Not one of the 22 stations on this page was rated Good.

Thirty days of levels: PM2.5 and PM10

PM2.5, daily level, not a residual (µg/m³)



PM10, daily level, not a residual (µg/m³)



READING

Reading: these are LEVELS, not residuals; higher means more pollution that day. The pale line is the observed level, weather included. Red is the weather-removed level, what the city's own emissions justify. Gaps are days without a model run.

CAUTION

Caution: 24-hour city means to 10 AM, except CO and Ozone, which are 8-hour maxima; NOx is in ppb.

SOURCE

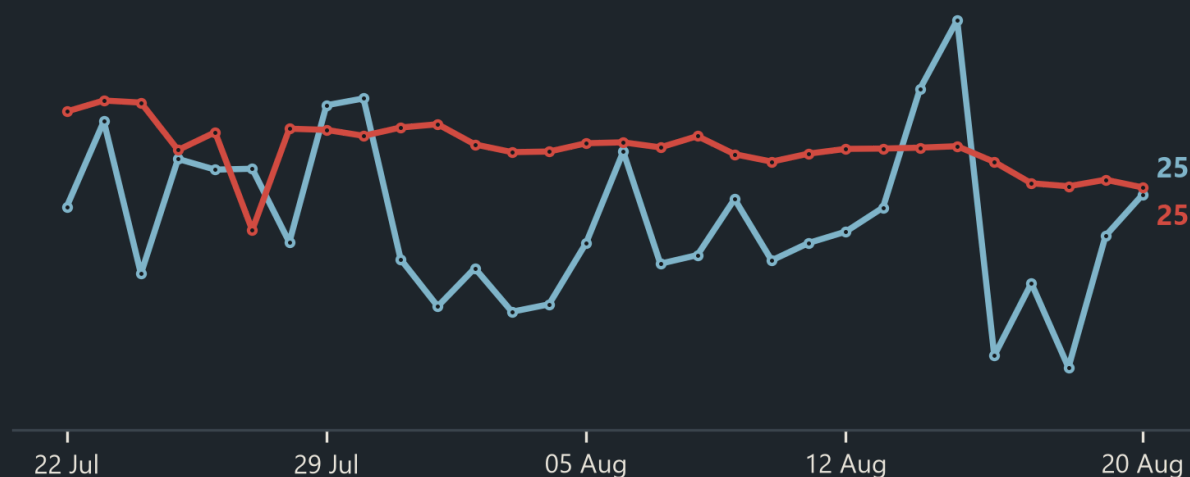
De-weathering pipeline, dw_multipollutant_daily, computed 2026-08-20; weather ERA5 and Open-Meteo [2].

THE POINT

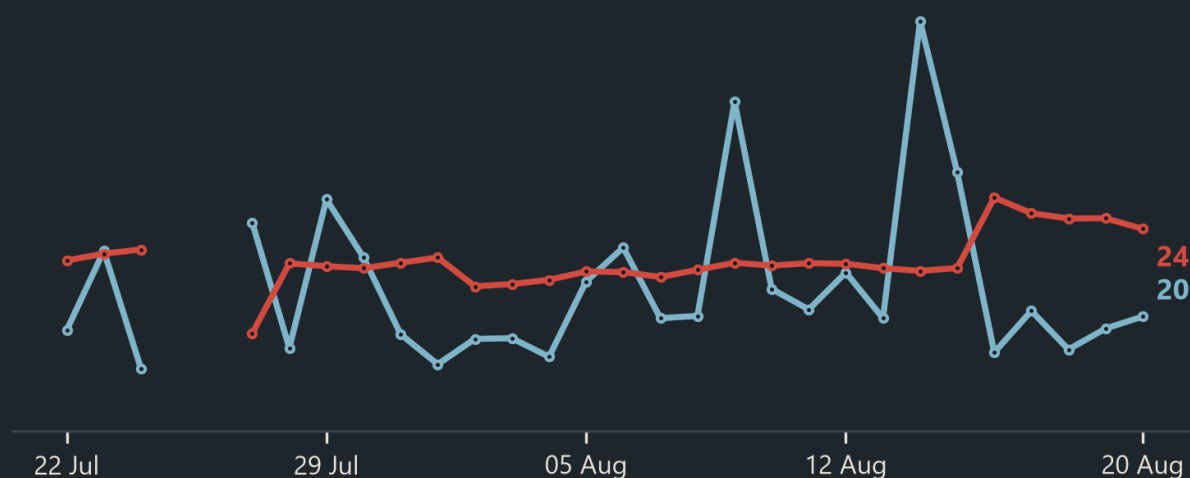
The weather-removed line sat above the measured line on PM2.5 for 21 of 30 days. On PM10 it did so on 22 of 30. On those days the weather was flattering the city.

Thirty days of levels: NO₂ and NO_x

NO₂, daily level, not a residual (µg/m³)



NO_x, daily level, not a residual (ppb)



READING

Reading: these are LEVELS, not residuals; higher means more pollution that day. The pale line is the observed level, weather included. Red is the weather-removed level, what the city's own emissions justify. Gaps are days without a model run.

CAUTION

Caution: 24-hour city means to 10 AM, except CO and Ozone, which are 8-hour maxima; NO_x is in ppb.

SOURCE

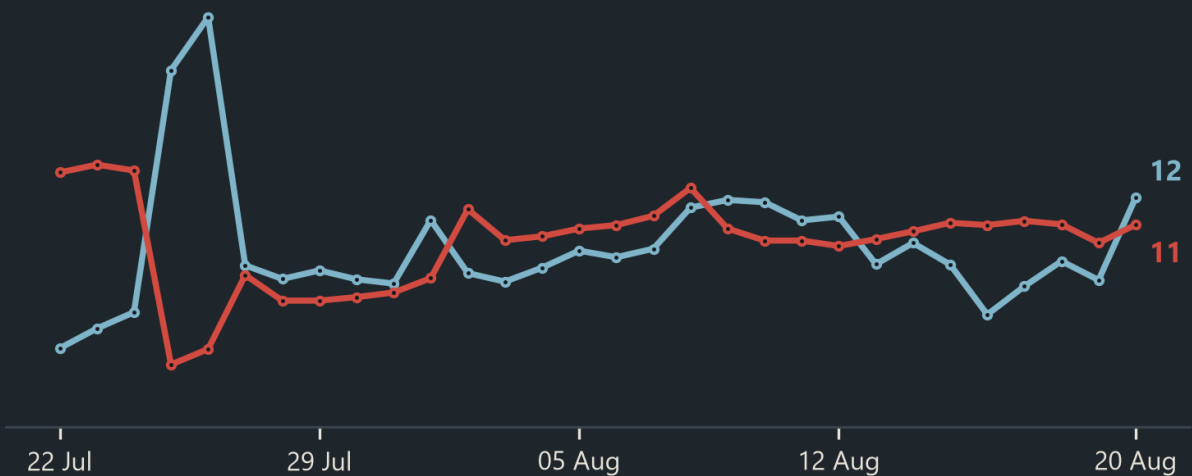
De-weathering pipeline, dw_multipollutant_daily, computed 2026-08-20; weather ERA5 and Open-Meteo [2].

THE POINT

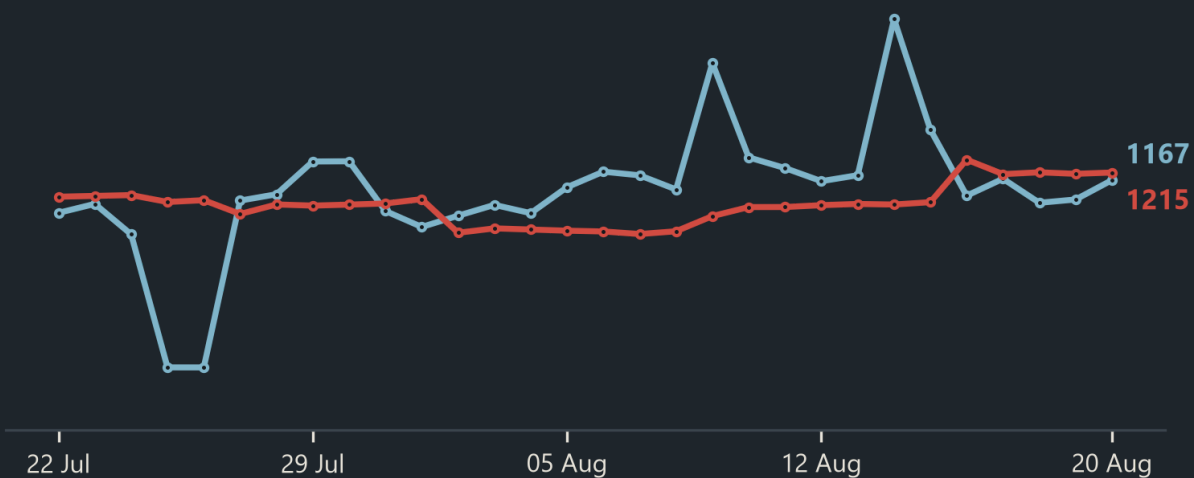
The weather-removed line sat above the measured line on NO₂ for 25 of 30 days. On NO_x it did so on 20 of 28. On those days the weather was flattering the city.

Thirty days of levels: SO2 and CO

SO2, daily level, not a residual (µg/m³)



CO, daily level, not a residual (µg/m³)



READING

Reading: these are LEVELS, not residuals; higher means more pollution that day. The pale line is the observed level, weather included. Red is the weather-removed level, what the city's own emissions justify. Gaps are days without a model run.

CAUTION

Caution: 24-hour city means to 10 AM, except CO and Ozone, which are 8-hour maxima; NOx is in ppb.

SOURCE

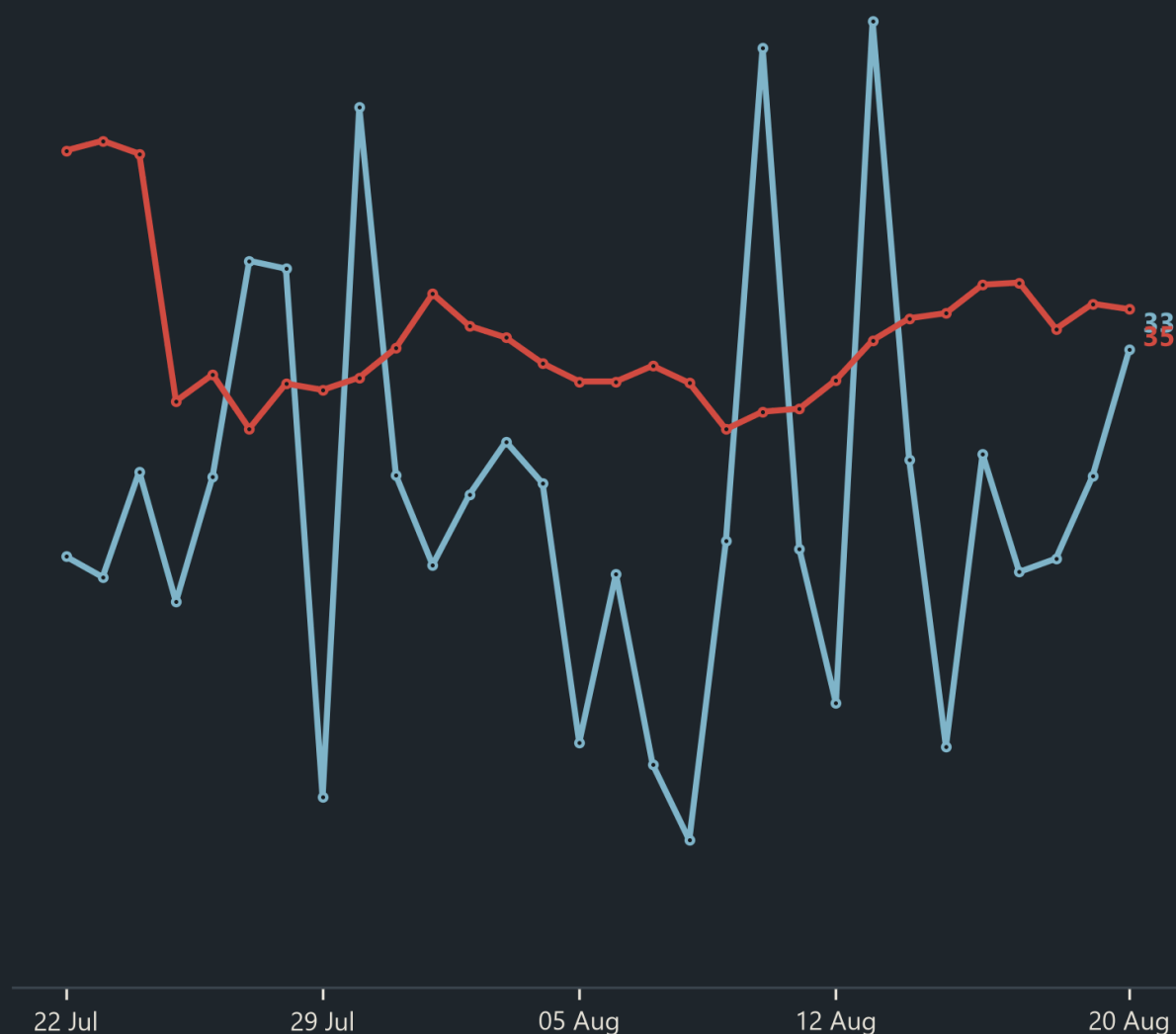
De-weathering pipeline, dw_multipollutant_daily, computed 2026-08-20; weather ERA5 and Open-Meteo [2].

THE POINT

The weather-removed line sat above the measured line on SO2 for 17 of 30 days. On CO it did so on 12 of 30. On those days the weather was flattering the city.

Thirty days of levels: Ozone

Ozone, daily level, not a residual ($\mu\text{g}/\text{m}^3$)



READING

Reading: these are LEVELS, not residuals; higher means more pollution that day. The pale line is the observed level, weather included. Red is the weather-removed level, what the city's own emissions justify. Gaps are days without a model run.

CAUTION

Caution: 24-hour city means to 10 AM, except CO and Ozone, which are 8-hour maxima; NO_x is in ppb.

SOURCE

De-weathering pipeline, dw_multipollutant_daily, computed 2026-08-20; weather ERA5 and Open-Meteo [2].

THE POINT

The weather-removed line sat above the measured line on Ozone for 25 of 30 days. On those days the weather was flattering the city.

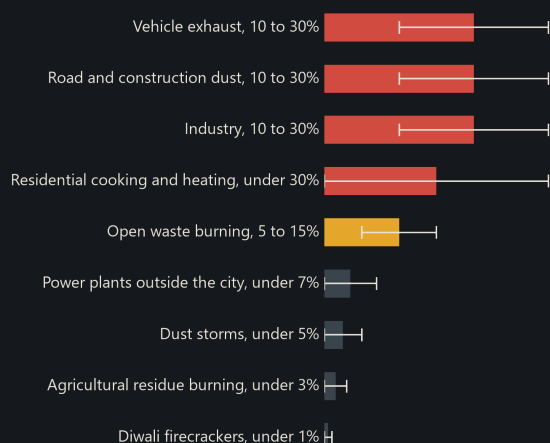
What the daily figures cannot say alone

The year behind today

Over the twelve months to 20 August 2026, Delhi's mean PM_{2.5} was 96 micrograms per cubic metre, which is 19 times the WHO guideline and 2.4 times India's annual standard, computed over 14,956 complete station-days at 47 reference stations. This is a station-day mean over reference-grade monitors, not the population-weighted city average the daily headline uses, so the two will differ slightly and are not interchangeable. For comparison, the published record gives 2021: 106, 2022: 100, 2023: 103, 2024: 102 micrograms per cubic metre, from UrbanEmissions.Info, What Is Polluting Delhi's Air, 2023-24 update, from a 40 station network. A single day is the wrong unit for a policy verdict, which is why this page carries the year beside it.

What is actually polluting this air

Across studies from 1990 to 2022, vehicle exhaust, road and construction dust and industry, including power plants each account for 10 to 30 per cent of Delhi's annual PM_{2.5}, so no single sector explains the level and no single remedy can fix it. Agricultural residue burning is under 3 per cent of Delhi's ANNUAL average PM_{2.5}, though its share in a smoke episode is far higher. Diwali firecrackers are under 1 per cent of the annual average, as a two day extreme event. These are annual shares. In winter the residential heating share rises sharply, and the seasonal sources rise with it. Source: Guttikunda and colleagues, What Is Polluting Delhi's Air? A Review from 1990 to 2022, Sustainability, 2023, Table 5.



Each bar is the midpoint and the whisker is the published range, so the width of a whisker is how much the studies disagree. The top three overlap completely, which is the finding: no one sector can be named the villain.

What the delay costs

Holding at 96 micrograms per cubic metre instead of reaching the 40 target by 2040 costs Delhi about 33 per cent more exposure and estimated mortality, and the delay since 2019 has already added about 23 per cent. The cost of delay has at least doubled since the National Clean Air Programme began, with little to no change in concentrations between 2019 and 2025. Reaching 40 micrograms per cubic metre by 2040 needs at least 10 to 15 years of systematic implementation across every sector at regional scale. These are increases in exposure and estimated mortality against reaching the target, not sums of money. Source: Guttikunda and colleagues, 40 by 2040: Cost of inaction and delays in reaching Delhi's air quality target, SIM-air working paper 63-2025, Tables 3 and 4.

What kinds of place the monitors sit in

Network composition: 8 traffic, 5 industrial, 13 residential, 1 commercial, 17 background. All five land uses required for a representative city average are covered. A city average means little unless the network covers a roadside, an industrial, a residential, a commercial and a background site, which is the published test of whether a network represents its city. Source: Site types read from each locality's character; the land use requirement is from SIM-48-2024 p. 5 and SIM-47-2024 p. 3.

None of the figures on this page are ours. They are published work, cited so the reader can check them, and they answer the questions the rest of this report raises but cannot settle.

The method, in plain English

Where the numbers come from

Every figure is read from the day's two machine-made feeds, never retyped. The window is 24 hours to 10 AM IST. A station's AQI is the CPCB bulletin method, the worst single-pollutant sub-index at that station. The city figure is the mean of station AQIs, 45 stations today.

How we compare with last year, and why the window is 15 days

Last year is never a single day. It is the average of the same date ± 7 days of 2025, using only stations present in both years (37 matched today). Delhi's air is driven by weather systems that come and go every three to seven days. A 15-day window spans two to three of those cycles, so no single storm or calm night can define normal. Neighbouring days are correlated, so the 15 days act like about seven independent readings. That cuts the baseline's one-day noise roughly two-and-a-half-fold. A wider window would blur the monsoon's arrival and the crop-burning surge. One honest limit: festival emissions are real pollution and stay in by design. A moving festival like Diwali can sit inside one year's window and not the other's, so October and November carry that caveat.

What population-weighted means

Delhi's monitors are not spread evenly over its people. The leafy centre has many stations covering few residents; single outer stations stand for lakhs. The weighted figure divides the city into zones, one per station, by a Voronoi map of the active monitors clipped to the NCT boundary. Each zone's population comes from the 70 Assembly Constituencies: the 2025 electoral rolls, about 15.61 million electors from ECI turnout data, scaled to the Registrar General's 2025 projection of 20.94 million. A station's weight is its zone's share of the population, re-scaled daily over the stations that reported. Honest limits: residents without voter registration are under-counted; stations added after March 2026 are not yet in the zone map; and no weighting fixes a monitor's siting or calibration.

What weather removed means

A random-forest model, 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. On days it has never seen, the model explains about 38 per cent of the variation. We therefore treat outputs as estimates, quote ranges, and never claim precision the model does not have. The pipeline's technical name for this is de-weathering; every lay page of this record uses the one name, weather removed.

The fairness check

Before we cite any weather driver, last year's baseline weather is compared with the 2021 to 2024 history for the same calendar days. If last year was freakish for that driver, we do not build an argument on it. That holds 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; gas directions may be cited when statistically clear. Ozone is the standing exception: it rises when traffic emissions fall, so it is permanently excluded from our claims.

Words used

AQI: the air-quality index, 0 to 500, higher is worse; 0 to 50 is Good, 301 to 400 Very Poor, over 400 Severe.

$\mu\text{g}/\text{m}^3$: micrograms of pollutant per 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.

Every figure traces to a dated feed

- 01 CPCB station data, read through the daily narration feed `CPCB_AQI_narration_2026-08-20.json`, generated 2026-08-20. The window is 24h ending 10 AM IST (aligned to daily $\mu\text{g}/\text{m}^3$ + de-weather); NOT CPCB's published calendar-day AQI. City figure is the mean of station AQIs; each station's AQI is its worst sub-index under the CPCB 2014 formula. Tier 1, the regulator's own published station data.
- 02 De-weathering pipeline, `dw_multipollutant_daily_20260820.json`, computed 2026-08-20. A random-forest weather model on ERA5 and Open-Meteo hourly data; its out-of-sample skill is printed on the page that uses it. Our own computation, stated as such and reproducible from the held code and data.
- 03 Weather comparison: ERA5 and Open-Meteo hourly observations, aggregated over the same 24h-to-10AM window as the AQI, with a 2021 to 2024 climatological normal for the anomaly check. Tier 1 as data, dated in the feed.
- 04 Population weighting: how many people each constituency holds comes from the 2025 Delhi electoral rolls, about 15.61 million electors in Election Commission of India turnout data, scaled to the Registrar General of India's 2025 projection for the National Capital Territory of 20.94 million. Where they sit inside a constituency comes from the WorldPop 2020 population grid at 100 m, adopted 12 August 2026 in place of an even spread over area, because that spread credited outer monitors with the residents of surrounding farmland. Station zones are a Voronoi map of the active monitors. Tier 1 as data, all series dated.
- 05 Year residual series and the cover cascade: the single-vintage reconstruction `dw_reconstruction_2026` with live-archive fallback; strict filename census; model refit weekly, trained through 2026-08-15; the same definitions as `hawakahisab.in`'s daily figures. Our own computation, stated as such.
- 06 Health characterisation: the CPCB category health descriptors as published with the index, and the WHO Global Air Quality Guidelines, 2021, for the PM2.5 and PM10 limits. Tier 1.

THE POINT

Both feeds are produced before this report and are never edited by it. What the feed does not carry, the page says is unavailable.