

Citizen Air Quality Platform

JanVayu

জনবায়ু · ஜன்வாயு · জনবায়ু

Citizen-built. Data-led.
Independent. Non-partisan.

A deep walkthrough of India's citizen air quality accountability platform.

What's covered. Every section of janvayu.in: live data and forecasts, health and exposure tools, the budget tracker, accountability dashboards, citizen tools, and the underlying data and design.

Presented by Varna Sri Raman · janvayu.in · May 2026

What we'll cover, in nine chapters

1. Frame & entry

Why JanVayu exists; the role-selector splash; how the site organises itself.

2. Live picture

Dashboard, live map, rankings, comparison, trends, forecast, hyperlocal, correlations, alerts, pollution calendar.

3. Health & exposure

Health Impact (GEMM), Children's Health, Women's Health, Indoor Air, Exposure Report, Should I Go Outside, Purifier, School Closures.

4. Economic & migration

Economic Cost calculator; Migration & Displacement; Migration Calculator.

5. Policy & accountability

Policy Effectiveness, Budget Tracker, Political accountability, Industrial Sources, Mission Tracker (E1-E5), Scorecards, AI Brief, Clean Air Wins, Legal Framework, RTI Assistant.

6. Citizen action

Take Action, Citizen Plan, Voices, Workshops, Learning Games, Social Feed, Live News.

7. Tools & knowledge

Ask JanVayu (AI), Tools, Glossary, Reading List, Downloads, Data Archive.

8. About, footer, compliance

Provenance, licensing, disclaimers, IT Act compliance.

9. Using JanVayu in your work

How researchers, journalists, and advocates can pull data, embed widgets, file RTIs, and integrate findings.

C H A P T E R

Chapter 1

Frame & entry

Why JanVayu exists, who built it, and how the site introduces itself to a first-time visitor.

Why a citizen air quality platform at all?

1.72M

Indian deaths per year from ambient PM2.5

Lancet Countdown 2025, India chapter (revised up from 1.5M)

~70%

share of the global ambient-PM2.5 mortality burden borne by India

Lancet GBD 2024 derivation

9.5% of GDP

estimated annual economic cost of air pollution

Lancet Countdown 2025; earlier World Bank work put it at 1.36%

22× WHO

Loni (UP) ranked most polluted city on Earth in IQAir 2025

IQAir World Air Quality Report, March 2026

What JanVayu actually is, in one paragraph

JanVayu (जनवायु, *people's air*) is India's independent, citizen-built air quality accountability platform. It tracks live PM2.5 across 33+ cities, translates exposure into health and economic costs using peer-reviewed dose-response models, and follows the public money meant to fix the problem. It is not a government dashboard and not affiliated with any commercial entity. It is non-partisan, independently funded, and published under MIT (code) and CC BY-NC-SA 4.0 (content) licences.

PM2.5-first

AQI hides danger. We display PM2.5 in $\mu\text{g}/\text{m}^3$ with WHO multipliers (\times n WHO) as the headline metric. AQI is shown as a secondary number.

Independent verification

RTI responses, CPCB data, NASA FIRMS imagery, peer-reviewed studies. Not government self-reporting.

Justice-aware

Air pollution is not evenly distributed. Indoor air, occupational exposure, and spatial injustice are explicit, separate sections.

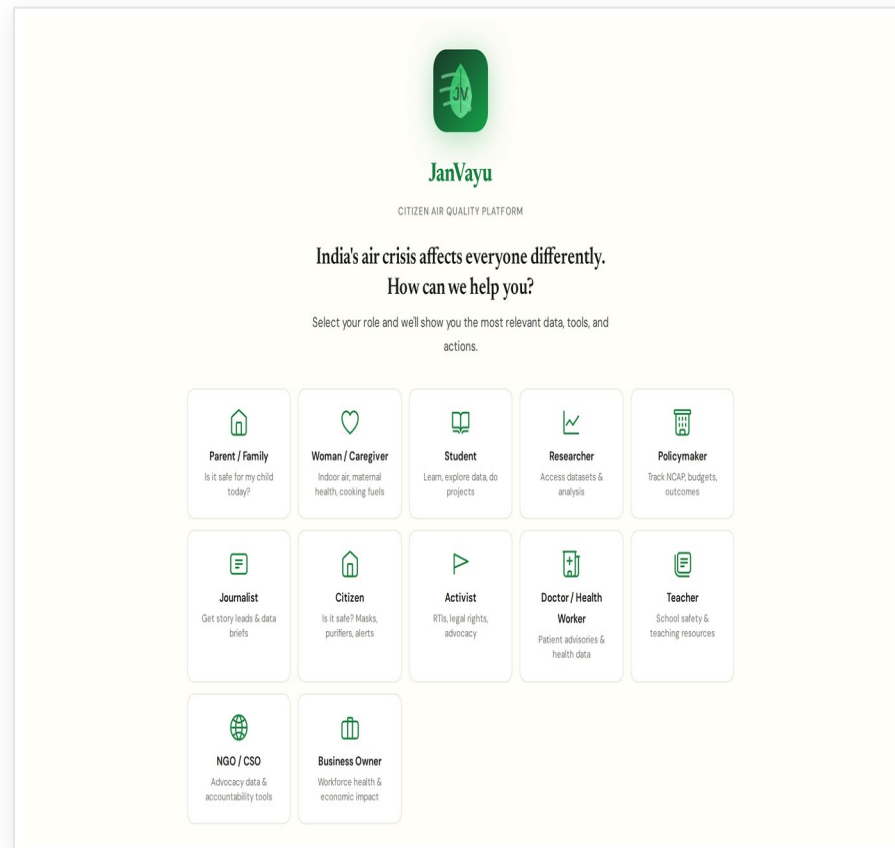
Pan-Indian access

Multilingual UI (English, Hindi, Tamil, Marathi, Bengali). Name chosen for pan-India linguistic accessibility.

The first thing a visitor sees

Personalised entry by role, a 'pick your path' splash

- Twelve role tiles: Parent/Family, Woman/Caregiver, Student, Researcher, Policymaker, Journalist, Citizen, Activist, Doctor/Health Worker, Teacher, NGO/CSO, Business Owner.
- Picking a role personalises the home view to surface the most relevant data and tools for that user.
- Woman/Caregiver and the split Citizen-vs-Activist tiles were added in the late-May 2026 refresh, reflecting that those audiences have distinct needs: indoor air and maternal health for one, RTIs and legal rights for the other.
- An explicit 'Skip, show me everything' escape hatch respects users who want the full firehose. Role is stored locally and can be changed any time from the icon at the top right; no account required.

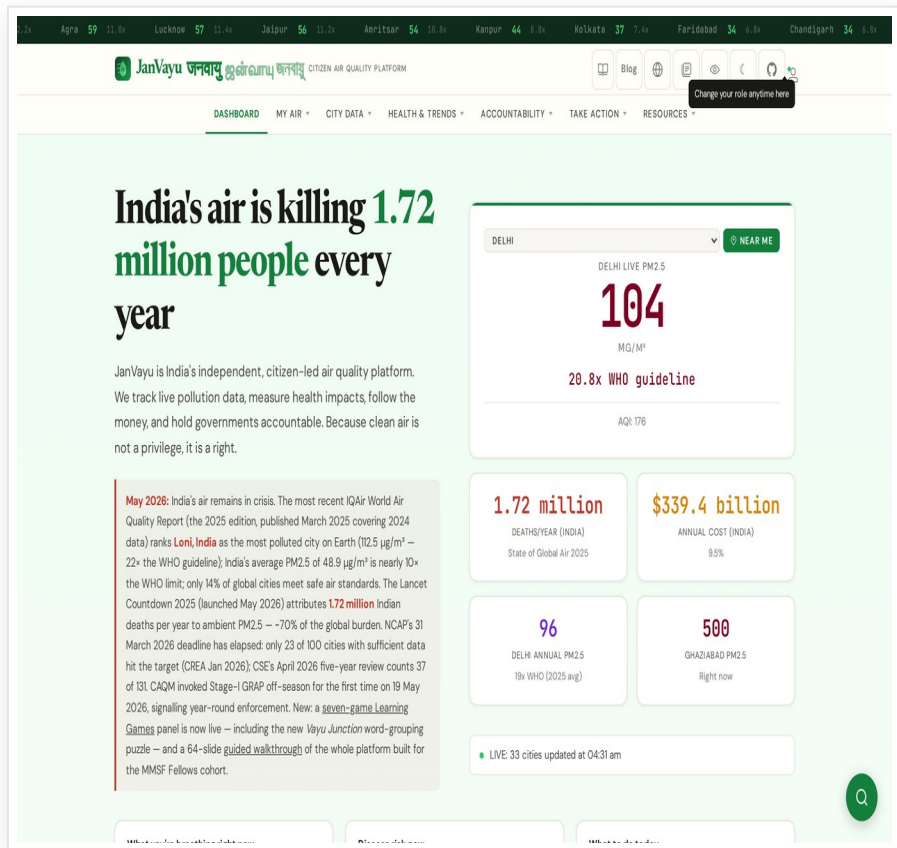


Site shell: what every panel inherits

Persistent header, live ticker, and a seven-group mega-menu

- Top: rolling ticker showing live PM2.5 for 33+ cities with the ×WHO multiplier (no abstraction, no composite).
- Branding row: multilingual logo (JanVayu / जनवायु / ജ്ഞംവായു), search (Ctrl+K), blog, language toggle, glossary, accessibility, dark mode, GitHub, role badge.
- Mega-menu collapses 45 panels into seven groups: Dashboard · My Air · City Data · Health & Trends · Accountability · Take Action · Resources.
- Below 1024px the whole nav collapses into a slide-out drawer; everything stays one tap away.

#site header (post-onboarding)



C H A P T E R

Chapter 2

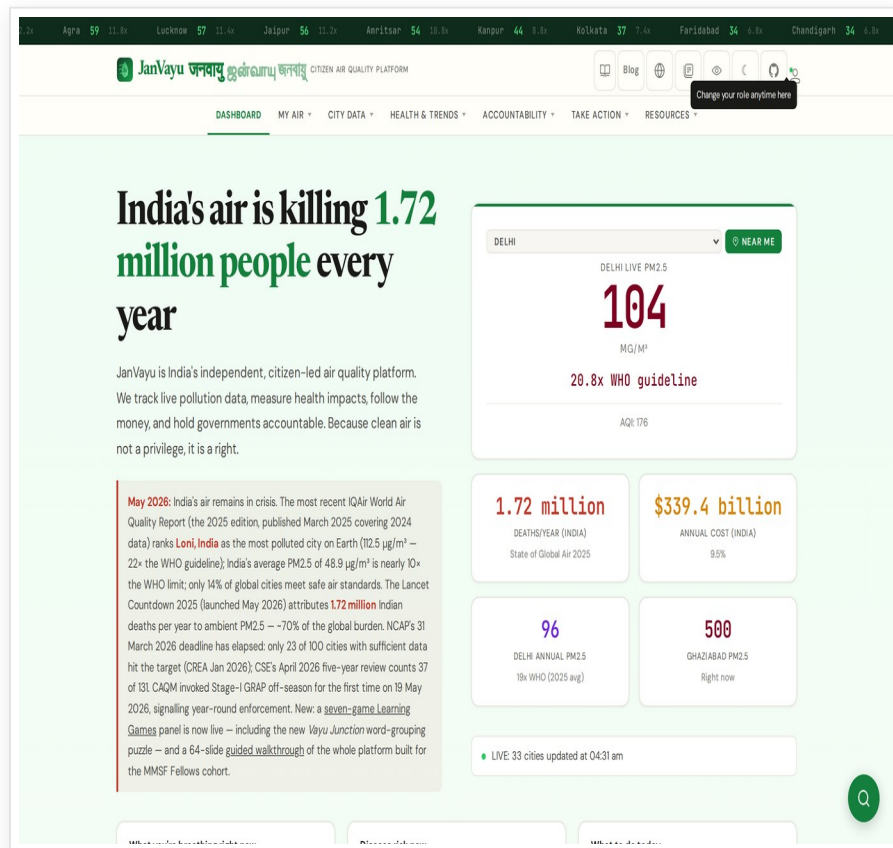
The live picture

Real-time PM2.5, forecasts, comparisons, geographic spread, and seasonal patterns. Ten panels that answer the question: what is happening, where, right now.

Dashboard

The single answer to 'how bad is it right now?'

- **Headline editorial framing:** 1.72 million people, every year. The number first, then the methodology.
- **Live PM2.5 card (Delhi default, switchable via 33-city dropdown or 'NEAR ME' geolocation):** value in $\mu\text{g}/\text{m}^3$, \times WHO multiplier, AQI shown as secondary.
- **Four stat cards:** India deaths/year (SoGA 2025), annual cost (\$339.4B / 9.5% GDP, Lancet Countdown 2025), Delhi annual PM2.5 ($96 \mu\text{g}/\text{m}^3$, $19\times$ WHO), and a 'right now' card for a feature city.
- **Live worst/best cities, GRAP status for Delhi-NCR, and 'Latest Updates' news feed** all anchor to current state.



Live Map

Three view modes: stations, heatmap, and historical climatology

- Leaflet-based interactive map with live AQI from WAQI API; markers sized by severity, auto-refreshing every 10 minutes.
- Three view modes via the toggle: Stations (default), Heatmap (pollution density), History (CPCB/IQAir climatology, 2024 to present).
- Marker numbers are US EPA AQI (unitless); clicking a marker reveals PM2.5 and PM10 in $\mu\text{g}/\text{m}^3$, station name, and update time.
- Useful for spotting hyperlocal hotspots that city-aggregate AQI dashboards conceal, and for visualising seasonal patterns via History mode.

water-spraying – not the combustion sources that drive most PM2.5.

guideline = 5, Indian standard last revised in 2009.

causal dose-response from a domestic 7-district cohort.

📍 Live Air Quality Map

Real-time AQI for major Indian cities from WAQI API. Marker numbers are AQI (US EPA scale, unitless); popups also show PM2.5 and PM10 concentrations in $\mu\text{g}/\text{m}^3$, station name, and update time.

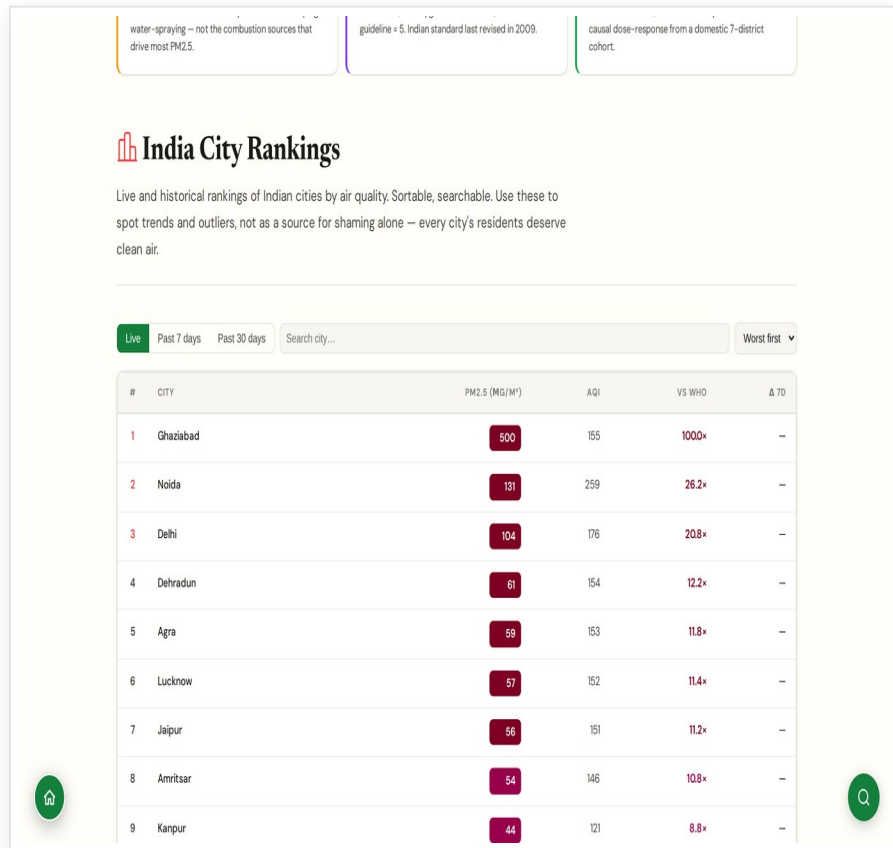
Live Data: Map markers show real-time AQI. Marker size indicates severity. Auto-refreshes every 10 minutes.

Refresh Now

City Rankings

Worst and best, ranked live and over the year

- Live ranked list of cities by current PM2.5: who is breathing the worst air at this hour.
- Annual rankings reproduce IQAir 2025 with the 22× Loni headline and the cluster of UP/Delhi-NCR cities at the top.
- Comparative ×WHO column makes the rankings interpretable across scales (a city at 5× and one at 20× are not 'both unsafe').
- Designed to be quotable for journalists; rankings link out to the underlying data source.



City Comparison

Side-by-side comparison of up to three cities

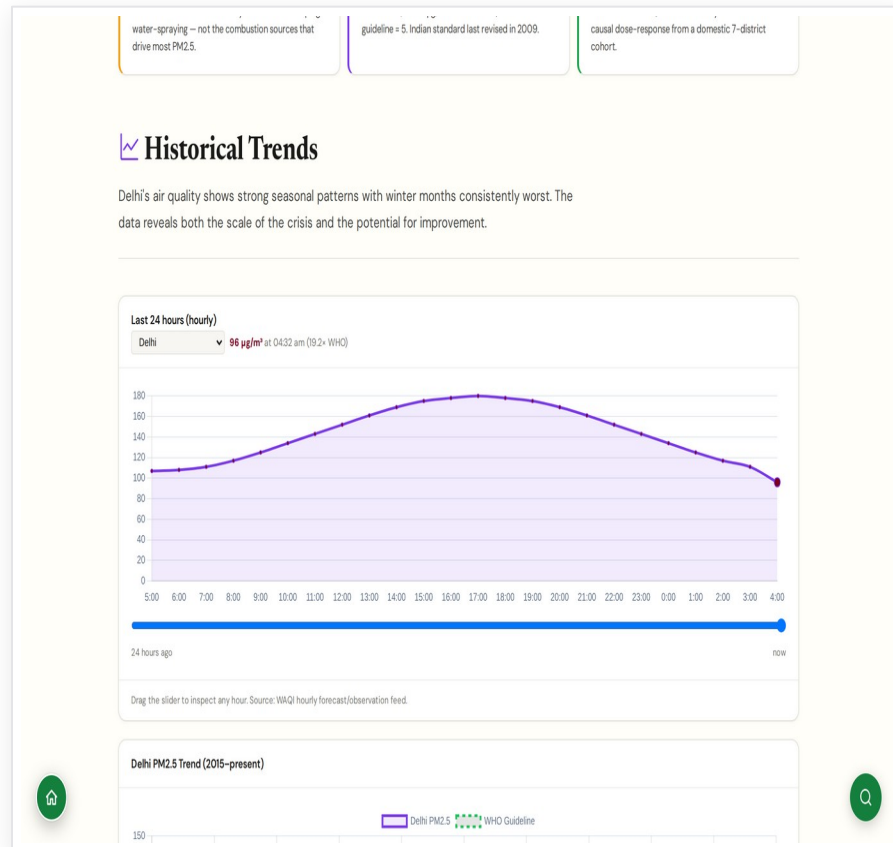
- Pick any three cities from the dropdown; the comparison panel pulls live data simultaneously.
- Comparison covers: current PM2.5, ×WHO ratio, 24-hour AQI trend, dominant pollutant, station count.
- Useful for op-eds and policy briefs: e.g. 'Delhi today is breathing X times what Bengaluru is breathing.'
- Last update timestamp shown explicitly so cited comparisons are time-stamped.

The screenshot shows a web application titled "Live City Comparison". At the top, there are three informational boxes: "water-spraying – not the combustion sources that drive most PM2.5.", "guideline = 5, Indian standard last revised in 2009.", and "causal dose-response from a domestic 7-district cohort." Below these is the main heading "Live City Comparison" with a globe icon. A sub-heading reads "Compare air quality across Indian cities and with international benchmarks. Data refreshes every 10 minutes from WAQI API." A status bar indicates "Live Data: Fetching real-time AQI from monitoring stations. Last update: --". The main interface features three dropdown menus for "Indian City 1" (Delhi), "Indian City 2" (Mumbai), and "International Benchmark" (Beijing (China)). A green "Refresh Live Data" button is positioned below the dropdowns. Three large boxes with "--" and "LOADING..." are shown, representing the data for each city. At the bottom, a "Live AQI Comparison" section includes a legend "Higher = Worse Air Quality" and a line graph with a y-axis from 350 to 500. A home button is in the bottom left and a search button is in the bottom right.

Historical Trends

Annual and seasonal PM2.5 trajectories

- Long-run series from CPCB CAAQMS and PRANA Portal: how PM2.5 has moved year on year since 2015.
- Headline timeline updated through May 2026: NCAP deadline elapsed, NGT directions, GRAP changes, IQAir release.
- Seasonal breakdown isolates the winter inversion period (October–February) from monsoon and pre-monsoon.
- Useful for assessing whether NCAP and city-level interventions are actually moving the needle.



Air Quality Forecast

Auditing official forecasts against actual outcomes

- Not a forecaster but a forecast auditor: tracks SAFAR (IITM/MoES), CPCB AQI dashboard, and WAQI/AQICN forecasts against subsequent CPCB readings.
- Most recent reliability assessment (Winter 2025-26): 72% Day-1 accuracy, 54% Day-2, 38% Day-3, where 'accurate' means within one AQI category.
- Key documented weakness: SAFAR consistently underestimates PM2.5 during sharp temperature inversions (Nov-Jan); this delays GRAP triggers by 24-48 hours.
- Live accuracy tracking resumes October 2026 with the start of the Winter 2026-27 pollution season.

water-spraying – not the combustion sources that drive most PM2.5. | guideline = 5, Indian standard last revised in 2009. | causal dose-response from a domestic 7-district cohort.

Air Quality Forecast

SAFAR (System of Air Quality and Weather Forecasting) and CPCB publish 72-hour forecasts. We track these forecasts against actual outcomes to measure their reliability.

Forecast Reliability Assessment

How accurate are official forecasts? Based on independent tracking of SAFAR Delhi predictions vs. CPCB actual readings for Winter 2025-26 (the most recent pollution season). Live accuracy assessment for the upcoming Winter 2026-27 season will resume in October.

72% **54%** **38%**

DAY-1 FORECAST ACCURACY (WITHIN 1 AQI CATEGORY) | DAY-2 ACCURACY | DAY-3 ACCURACY

Key weakness: SAFAR consistently underestimates PM2.5 during sharp temperature inversions (Nov-Jan). This matters because GRAP stage decisions depend on forecasts. Underestimation delays protective measures by 24-48 hours.

Official Forecast Sources

SAFAR (IITM/MoES)
India's primary AQ forecast system. Covers Delhi, Mumbai, Pune, Ahmedabad. Provides 72-hour PM2.5/PM10/O3 forecasts with emission-based WRF-Chem model. Updated twice daily.

CPCB AQI Dashboard
Real-time AQI bulletin with next-day forecast. Covers all CAAQMS stations nationally. Basis for GRAP trigger decisions.

WAQI/AQICN Forecast
Independent 5-day forecast using multiple models. Useful for cross-referencing official forecasts.

Meteorological Factors to Watch

My Neighbourhood

Air quality at the neighbourhood scale

- Pulls every nearby sensor (CPCB + WAQI low-cost networks) within a configurable radius of a point.
- Reveals intra-city variation that city-aggregate AQI hides: industrial belts, traffic corridors, ridge areas.
- Important for environmental justice analysis: poor neighbourhoods often have substantially worse air than the city mean.
- Caveat surfaced: low-cost sensors need correction; raw readings are flagged as such.

water-spraying – not the combustion sources that drive most PM_{2.5}.

guideline = 5, Indian standard last revised in 2009.

causal dose-response from a domestic 7-district cohort.

My Neighbourhood

Compare monitoring stations within your city. Not all neighborhoods breathe the same air.

Select City

Delhi

Searching for monitoring stations near Delhi...

JanVayu जन्वायु

Independent citizen-led air quality monitoring, health impact analysis, and government accountability tracking for India. Clean air is not a privilege, it is a right.

Part of **AirQuality for Janhit** by MMSF Fellows, APC, Data from WAQI, CPCB, WHO, CREA, and UrbanEmissionsInfo

Navigate

- Dashboard
- Health Impact
- Economic Cost
- Policy
- Accountability

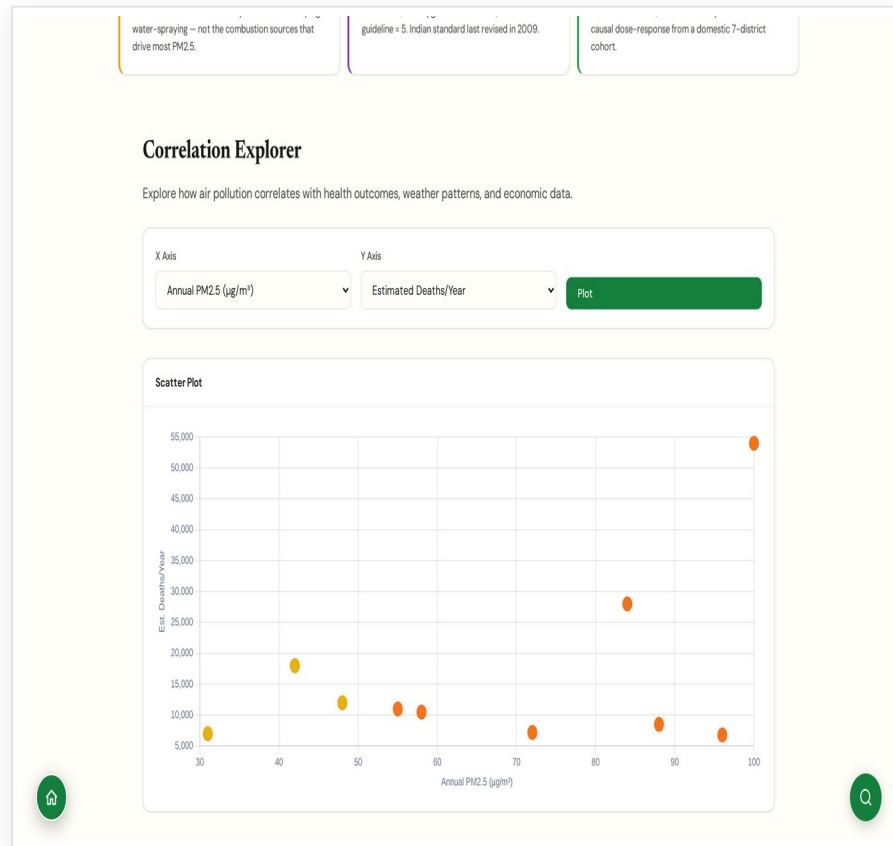
Tools & Action

- RTI Templates
- Citizen Action
- Resources
- Downloads
- Learning Games
- Walkthrough
- Ask JanVayu (AI)
- Blog
- Docs
- Full Bibliography / Zetocor

Pollution Correlations

Explore how PM2.5 correlates with health, economic, and demographic outcomes

- Scatter and correlation plots across Indian cities: X-axis options include annual PM2.5, average AQI, and population; Y-axis options include estimated deaths/year, life-years lost, economic cost (% GDP), and a hospital admissions index.
- Designed for journalists and researchers building the link between exposure and outcome at a city level, not for source apportionment within a single city.
- Outputs are population-level estimates, useful for the 'X city loses Y life-years per $\mu\text{g}/\text{m}^3$ ' framing common in policy memos.
- Underlying data anchors to Lancet Countdown 2025, GBD 2021, and Krishna et al. 2024.



AQI Alerts

Browser push or daily email digest when your city crosses a threshold

- Two delivery channels: instant browser push notifications via the Web Push API, or a daily email digest.
- Threshold options follow Indian AQI bands (100/200/300/400) since most users think in those categories; PM2.5 is shown in the alert payload alongside the AQI value for the WHO comparison.
- Useful for vulnerable users (asthmatics, parents of young children, elderly carers) and for monitoring multiple cities at once via the email digest.
- No account required. Browser subscription is per-device; email digest accepts a city list.

water-spraying – not the combustion sources that drive most PM2.5. guideline = 5, Indian standard last revised in 2009. causal dose-response from a domestic 7-district cohort.

AQI Alert System

Get notified when air quality crosses dangerous thresholds. Choose browser notifications (instant) or daily email digests.

Browser Notifications (Instant)

Your City

Delhi

Alert when AQI exceeds

200 (Poor)

Enable Browser Notifications

Email Digest (Daily)

Get a daily AQI summary for your cities. No account needed.

Email Address

you@example.com

Cities to monitor

Delhi Mumbai Kolkata Bengaluru Lucknow Patna

Alert threshold

AQI > 200 (Poor)

Subscribe to Daily Digest

Active Browser Alerts

No alerts configured.

Browser alerts check every 10 minutes using live WAQI data. Works while this tab is open. Email digests are sent daily regardless.

Unsubscribe from Email

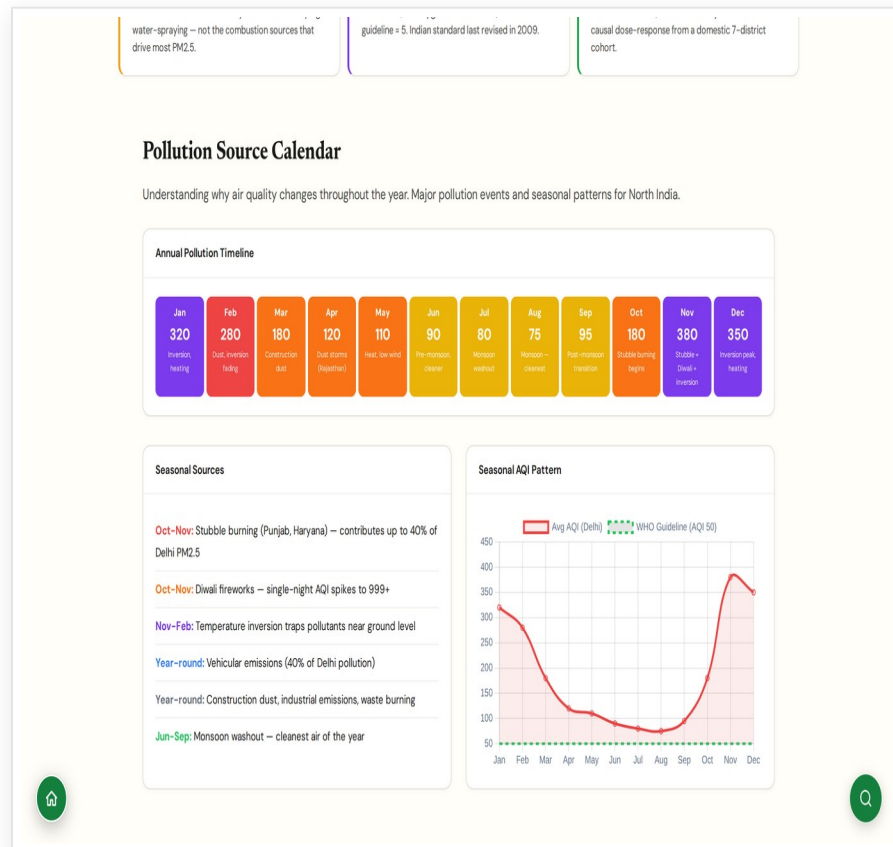
you@example.com

Unsubscribe

Pollution Calendar

Twelve-month timeline showing average levels and the dominant source for each month

- Annual timeline for North India: each month carries both an average AQI value and a named driver (Jan inversion + heating, Mar construction dust, Apr Rajasthan dust storms, Jul-Aug monsoon washout, Oct-Nov stubble + festive emissions, Dec inversion peak).
- Makes the winter-vs-monsoon asymmetry visible at a glance: Aug averages ~75, Jan averages ~320 in Delhi.
- Designed for planning: travel windows, marathon dates, school sports calendars, festival outdoor events.
- Anchored in multi-year historical CPCB data, not the most recent year alone.



C H A P T E R

Chapter 3

Health & exposure

Translating $\mu\text{g}/\text{m}^3$ into mortality, lost life-years, asthma risk, and 'should I send my child out today'. Eight panels rooted in peer-reviewed dose-response models.

Health Impact

Personal mortality risk via the Global Exposure Mortality Model

- Calculator inputs: age, city (annual PM2.5), hours outdoors daily, pre-existing conditions (none / asthma / COPD / cardiovascular / multiple).
- Outputs: excess mortality risk vs WHO guideline (5 $\mu\text{g}/\text{m}^3$), expected life-years lost, cigarette-equivalent exposure (Berkeley Earth methodology).
- Uses GEMM (Burnett et al., PNAS 2018), the dose-response function used in GBD studies; GBD 2021 attributes 4.72M global deaths to PM2.5 (7.9% of adult deaths).
- Adjacent 'Why PM2.5, not AQI?' section makes the editorial choice explicit: AQI's masking effect (only reports the worst pollutant) and breakpoint misalignment (India's 'satisfactory' allows PM2.5 up to 60 $\mu\text{g}/\text{m}^3$, 12 \times WHO) are surfaced inline.

water-spraying – not the combustion sources that drive most PM2.5.

guideline = 5, Indian standard last revised in 2009.

causal dose-response from a domestic 7-district cohort.

Your action: Calculate your personal health risk

Enter your age, city, and health conditions below to see your estimated mortality risk from PM2.5 exposure.

[Start calculator ↓](#)

Personal Health Risk Calculator

Estimate your health risk from air pollution using the **Global Exposure Mortality Model (GEMM)** – the gold standard for PM2.5 mortality estimation.

Why PM2.5, Not AQI?

Problems with AQI

- **Masking effect:** Reports only the worst pollutant – other dangerous levels hidden
- **Breakpoint misalignment:** India's 'satisfactory' (AQI 50-100) allows PM2.5 up to 60 $\mu\text{g}/\text{m}^3$ – 12 \times WHO guideline
- **Not used in health models:** GEMM, GBD, IER all use PM2.5 concentration, not composite indices
- **International incomparability:** Different countries use different AQI scales

Why PM2.5 is the Standard

- **Primary mortality driver:** GBD 2021 attributes 4.72M global deaths to PM2.5 (7.9% of adult deaths)
- **Health models calibrated to PM2.5:** GEMM exposure-response functions use $\mu\text{g}/\text{m}^3$
- **WHO guidelines in PM2.5:** 5 $\mu\text{g}/\text{m}^3$ annual, 15 $\mu\text{g}/\text{m}^3$ 24-hour (2021 update)
- **Effects at low levels:** Mortality associations found even below 10 $\mu\text{g}/\text{m}^3$

Key insight: Delhi's AQI might show 'moderate' (100) while PM2.5 is 60 $\mu\text{g}/\text{m}^3$ – that's still 12 \times the WHO guideline and associated with significant excess mortality risk.

Your Results

Your PM2.5 Exposure Profile

Your Age

Children's Health

Specific Indian paediatric numbers, not just 'children are more vulnerable'

- 169,000 under-5 deaths attributed to air pollution in India (IHME GBD 2021); 30%+ of under-5 pneumonia deaths linked to indoor air (ICMR); 2.6× asthma rate near highways.
- School closure tracker: 68 cumulative pollution-driven closure days in Delhi (2023-2026); ~30 days in Winter 2025-26 alone across six closure windows from Nov to Jan; ~4M+ school-age children affected in Delhi-NCR.
- Developmental impacts: 8-10% lower lung capacity by 18 in high-PM2.5 cohorts (Lancet Respiratory Medicine 2023); PM2.5 in early childhood linked to lower maths and reading scores controlling for income (PNAS 2024); 1.3× preterm and 1.5× low-birth-weight rates during Delhi winter peaks (AIIMS neonatal).
- What parents can do (linked directly from the panel): request school air audits with low-cost sensors (Rs 3,000-5,000), advocate for HEPA or Corsi-Rosenthal box per classroom (Rs 5,000-10,000), file RTI on stalled Delhi

water-spraying – not the combustion sources that drive most PM2.5.

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⊗ Children's Health Dashboard

Children breathe twice the air per kilogram of body weight. Their developing lungs, brains, and immune systems are uniquely vulnerable. Every school closure day, every asthma hospitalisation, every stunted lung represents a failure of governance.



School Closures Tracker

Delhi schools shifted to online mode multiple times during Winter 2025-26 (the most recent pollution season). Under GRAP Stage III/IV, all primary schools close when AQI exceeds 400. Students in government schools often lack devices for online learning, widening the education equity gap. The next closure window opens with the post-monsoon pollution season – typically late October 2026.

Winter 2025-26 closures (most recent pollution season)

Nov 4-8, Nov 14-18, Nov 22-26, Dec 2-5, Jan 6-10, Jan 16-20. **Total: ~30 days** across Winter 2025-26. An estimated 4+ million school-age children affected in Delhi-NCR alone. Learning loss is cumulative and disproportionately harms first-generation learners.

Developmental Impacts

Lung development: A 2023 study in *Lancet Respiratory Medicine* documented that children growing up in high-PM2.5 environments develop 8-10% lower lung capacity by age 18, an irreversible deficit.

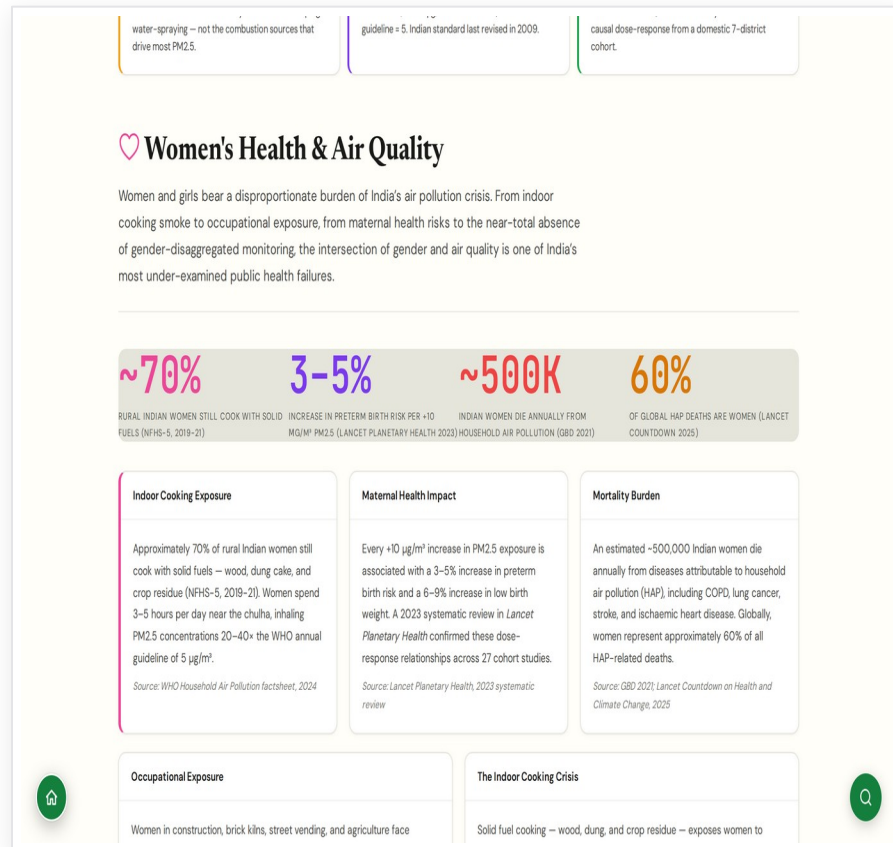
Cognitive function: Research published in *PNAS* in 2024 documented that PM2.5 exposure during early childhood correlates with lower maths and reading scores, controlling for income. The mechanism: inflammation and oxidative stress crossing the blood-brain barrier.

Birth outcomes: Pregnant women in Delhi-NCR exposed to winter PM2.5 levels show higher rates of preterm birth (1.3x) and low birth weight (1.5x). AIIMS neonatal data consistently shows November-January as the peak period for premature deliveries.

Women's Health

Why air pollution hits women harder, and the gender data gap

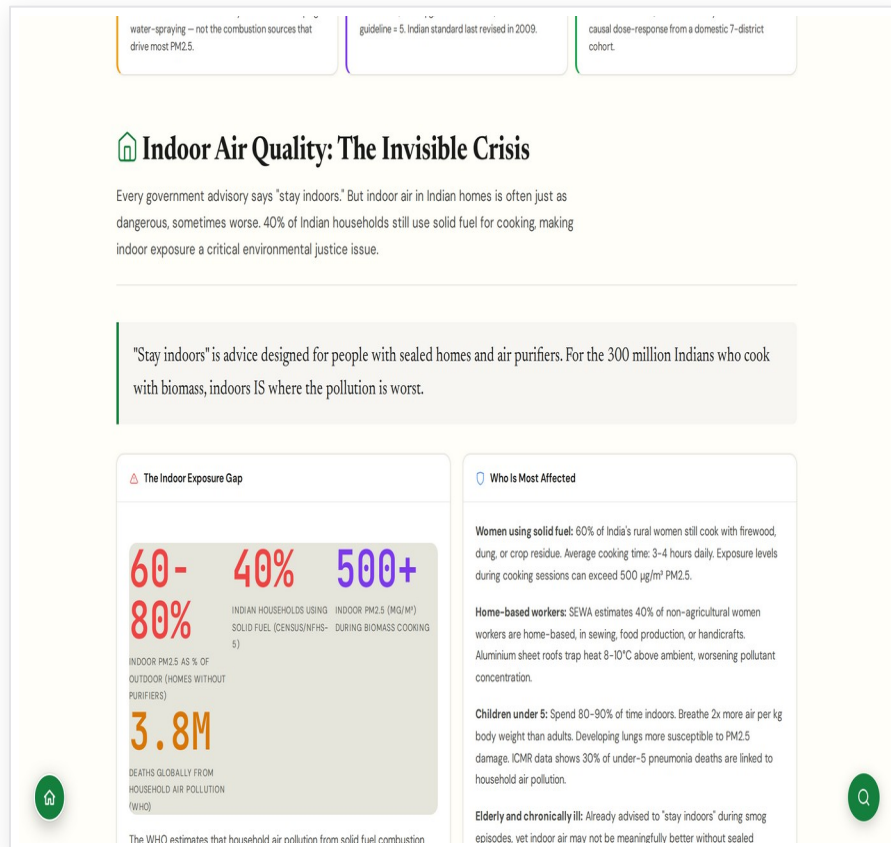
- Roughly 70% of rural Indian women still cook with solid fuels (NFHS-5, 2019-21); indoor PM2.5 reaches 20-40× the WHO annual guideline during cooking, with 3-5 hours of daily exposure.
- Each +10 $\mu\text{g}/\text{m}^3$ PM2.5 raises preterm-birth risk by 3-5% and low-birth-weight risk by 6-9% (Lancet Planetary Health 2023 systematic review, 27 cohorts).
- Roughly 500,000 Indian women die annually from household air pollution (GBD 2021); women bear about 60% of global HAP deaths (Lancet Countdown 2025).
- Occupational exposure layered on top: construction, brick kilns, street vending, agriculture. India still lacks gender-disaggregated ambient monitoring at scale.



Indoor Air

The half of the problem ambient sensors miss entirely

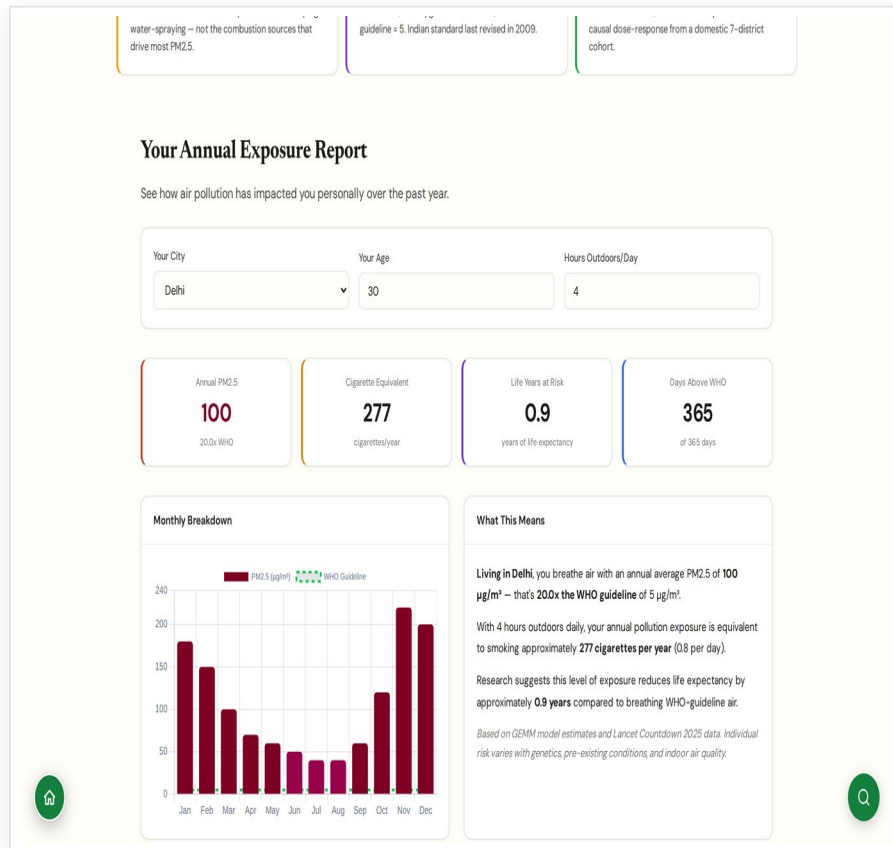
- 40% of Indian households still use solid fuel for cooking (Census/NFHS-5); indoor PM2.5 reaches 500+ $\mu\text{g}/\text{m}^3$ during biomass cooking; 3.8M global deaths annually from household air pollution (WHO).
- 60% of rural Indian women cook with firewood, dung, or crop residue, 3-4 hours daily; SEWA estimates 40% of non-agricultural women workers are home-based (sewing, food, handicrafts) in heat-trapping aluminium-roofed homes.
- Children under 5 spend 80-90% of time indoors; ICMR data links 30% of under-5 pneumonia deaths to household air pollution; PMUY 2.0 distributed 10+ Cr connections but refill rates remain 50-60% in some states.
- Practical guidance with costs: Corsi-Rosenthal box (Rs 2,000-3,000) reduces indoor PM2.5 by 40-60%; LPG/induction transition; cross-ventilation and kitchen separation per WHO Housing and Health Guidelines (2018).



Exposure Report

A personal exposure dossier you can download

- Pulls your city's PM2.5 over a user-selected window and computes cumulative exposure metrics.
- Compares your cumulative exposure to WHO annual guideline ($5 \mu\text{g}/\text{m}^3$) and to a healthy baseline.
- Outputs as a clean PDF the user can share with a doctor or use in a complaint or letter.
- Designed for occupational exposure cases: gig workers, traffic police, sanitation workers, vendors.



Should I Go Outside?

The one-question version, for everyday decisions

- Single input, your city, produces a clear yes / yes-with-mask / no / absolutely-not answer.
- Tailored by age, condition (asthma, pregnant, elderly), and planned activity (walk, jog, full workout).
- Designed for parents and carers; copy is non-technical and decision-ready.
- Hindi version available; uses everyday phrasing rather than $\mu\text{g}/\text{m}^3$.

water-spraying – not the combustion sources that drive most PM2.5.

guideline = 5, Indian standard last revised in 2009.

causal dose-response from a domestic 7-district cohort.

Your action: Check if it's safe to go outside right now
 Select your city and activity below for a personalized recommendation based on live AQI.

Should I Go Outside?

Real-time decision engine based on live air quality data, your activity, and health profile.

Your Details


City

Activity

Duration

Health Profile

Recommendation



CAUTION – Limit exposure

Consider reducing time outdoors or intensity of activity.

Mask: N95 mask recommended if sensitive.
Current AQI: 176 (Poor)
PM2.5: 104 $\mu\text{g}/\text{m}^3$ (20.8x WHO guideline)

Detailed Breakdown




Purifier Calculator

How big a purifier, how many rooms, how long?

- Inputs: room size (m³), outdoor PM2.5, hours of use, ACH (air changes per hour) targeted.
- Output: minimum CADR (m³/h) required, recommended purifier capacity bands, electricity cost estimate.
- Honest about limits: no purifier replaces source control; protects from chronic, not acute, exposure.
- Includes guidance for low-cost alternatives (Corsi-Rosenthal boxes for institutional settings).

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Air Purifier Calculator

Find the right purifier for your room size, budget, and local air quality.

Room Details

Room Area (sq ft)

Ceiling Height (ft)

City (for current AQI)

Target Indoor AQI

[Calculate](#)

Recommendation

Required CADR

168 CFM

(284 m³/h)

Room: 200 sq ft × 10 ft = 2,000 cu ft

Current AQI: 116 (PM2.5: 104)

Air changes needed: 5x/hour

Price range: ₹10,000 - ₹25,000

Filter replacement: ~₹2,500-5,000/year

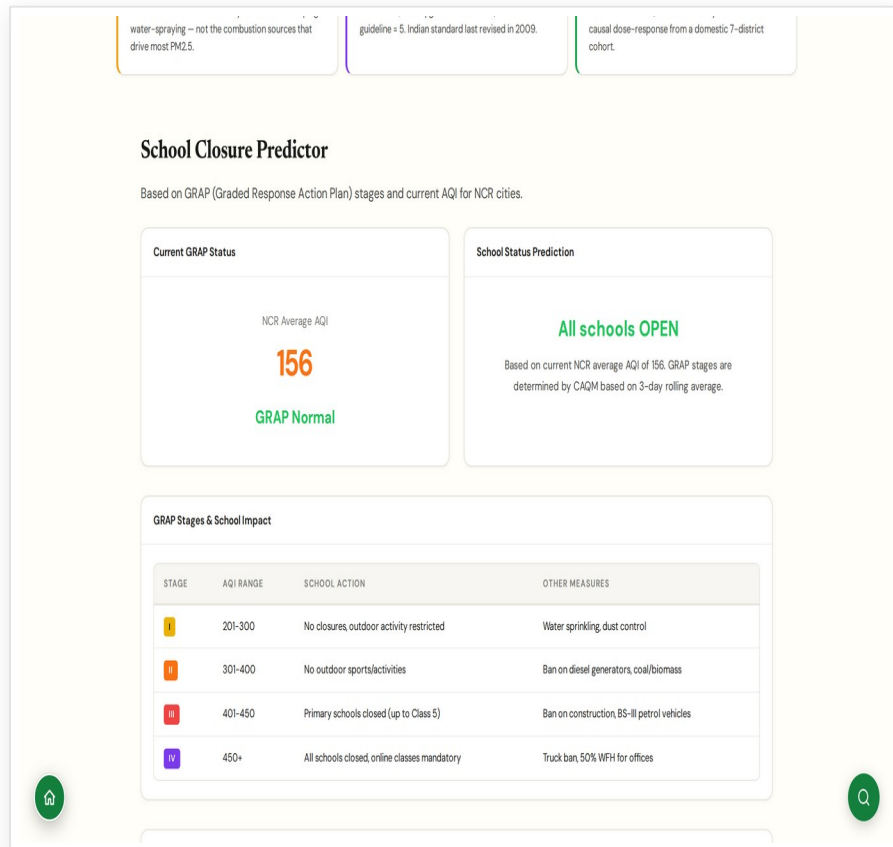
Suggested models: MI Air Purifier 4, Coway Airmega 200, Dyson Pure Cool, Blue Star BS-AP450

Tip: Seal windows and doors for best results. Run purifier 30 minutes before entering room. Replace filters on schedule – a clogged filter is worse than no purifier.

School Closures

A live GRAP-driven predictor, not just a closure tracker

- Live NCR average AQI feeds a per-stage prediction: open / no outdoor sport / primary closed / all closed; today's status visible at the top of the panel.
- Full GRAP stages table laid out: Stage I (AQI 201-300) no closures but outdoor activity restricted, Stage II (301-400) no outdoor sport, Stage III (401-450) primary schools shut, Stage IV (450+) all schools shut, online classes mandatory.
- NCR city grid shows current AQI per city alongside its category (Delhi, Gurgaon, Noida, Faridabad, Ghaziabad), surfacing the unevenness inside the metro.
- Decisions are taken by CAQM on a 3-day rolling average, so the panel exposes both the live snapshot and the rolling figure that actually triggers an order.



C H A P T E R

Chapter 4

Economic cost & migration

What air pollution costs employers, GDP, and the people who have to move to escape it.

Economic Cost

Workforce productivity loss calculator for employers

- Inputs: headcount, average annual salary, city. Output: annual productivity loss in INR.
- Built on Dalberg-style absenteeism + presenteeism estimates by PM2.5 band, sector-tunable.
- Designed to give CSR and HR teams a credible number for purifier deployment business cases.
- National aggregate: ~\$95B productivity loss / year (Dalberg 2021); \$339.4B all-in (Lancet Countdown 2025, 9.5% GDP).

water-spraying – not the combustion sources that drive most PM2.5.

guideline = 5, Indian standard last revised in 2009.

causal dose-response from a domestic 7-district cohort.

Your action: Calculate pollution's cost to your business Estimate costs ↓

Use the workplace cost estimator below to see productivity losses for your team size and city.

₹ Economic Cost of Air Pollution

Air pollution costs India **\$36.8 billion annually** (1.36% GDP) through healthcare, lost productivity, and premature deaths. At broader economic measures, costs reach \$339 billion (9.5% GDP).
 Source: Lancet Planetary Health 2021 / Lancet Countdown 2025

\$36.8B

ANNUAL COST (1.36% GDP)

1.67M

DEATHS/YEAR

17.8%

OF ALL DEATHS

5.3 yrs

LIFE EXPECTANCY LOSS

Economic Impact by Sector

- Presenteeism (reduced productivity)
- Premature mortality
- Reduced consumer footfall
- Absenteeism
- Health expenditure

Business Productivity Loss Calculator

Number of Employees

Average Monthly Salary (Rs.)

City

Calculate Annual Loss

Migration & Displacement

When people leave because they cannot breathe, and when they cannot

- Who leaves: IT/tech professionals choosing Bangalore, Pune, Hyderabad over Delhi-NCR; job-portal data shows 10-20% 'pollution premium' demands for winter Delhi postings.
- Who stays: 15+ million informal-sector workers in Delhi-NCR (construction, domestic, street vending, delivery, waste-picking) with no work-from-home option, no employer-provided masks, no health insurance.
- Industrial-zone residents in Bawana, Wazirpur, Mundka are doubly trapped: they cannot leave because housing is affordable adjacent to polluting industries, and GRAP Stage IV halts construction with no compensation.
- The asymmetry is the environmental justice frame: voluntary migration as adaptive capacity, involuntary exposure as the cost of poverty.

water-spraying – not the combustion sources that drive most PM2.5.

guideline = 5, Indian standard last revised in 2009.

causal dose-response from a domestic 7-district cohort.

Migration & Climate Displacement

Air quality is becoming a driver of internal migration. Skilled professionals leave Delhi for Bangalore, Pune, Hyderabad. But informal workers who bear the worst exposure have no option to leave. This asymmetry defines the environmental justice crisis.

"Just moved to Bangalore from Delhi. It's been 2 weeks. I instinctively checked AQI this morning. It was 45. I cried. Actual tears. I didn't know air could be like this." – r/delhi, 4.2K upvotes (late 2025; the cleaner-air-elsewhere story has only intensified through 2026)

Who Is Leaving

IT/Tech professionals: Anecdotal and job portal data show increasing preference for Bangalore, Pune, Hyderabad offices over Delhi-NCR. Companies report 'pollution premium' demands of 10-20% for Delhi postings during winter.

Families with young children: Paediatrician referral patterns show parents citing air quality as primary reason for relocation. Schools in south India report increased admissions from Delhi-NCR families.

Retirees: Chronic respiratory conditions exacerbated by Delhi winters push elderly residents toward Dehradun, Goa, Kerala. Real estate agents report 'air quality migration' as a selling point for southern properties.

Who Cannot Leave

Informal workers: 15+ million informal workers in Delhi-NCR (construction, domestic work, street vending, waste picking, delivery). No work-from-home option. No employer-provided masks or health insurance. Exposure is occupational and unavoidable.

Industrial zone residents: Families in Bawana, Wazirpur, Mundka live adjacent to polluting industries because housing is affordable there. Moving means losing livelihood proximity. A textbook environmental justice pattern.

Migrant construction workers: 2-3 million seasonal construction workers in NCR. GRAP Stage IV halts construction, eliminating income with no compensation. They breathe the worst air when working, and lose income when air quality triggers shutdowns.

Migration Calculator

Would moving cities actually help your family?

- Input: current city, candidate city, years of expected residence.
- Output: change in cumulative PM2.5 exposure, change in expected life-years (GEMM), commute/cost framing.
- Honest framing: most cities still exceed WHO; the question is by how much.
- Useful for families weighing job-driven moves; for teachers it is a teaching tool on exposure differentials.

water-spraying – not the combustion sources that drive most PM2.5.

guideline = 5, Indian standard last revised in 2009.

causal dose-response from a domestic 7-district cohort.

Migration Cost-Benefit Calculator

Thinking of moving for cleaner air? Compare the health-adjusted benefit of relocating.

Compare Cities

Current City
Delhi

Considering Moving To
Bengaluru

Your Age
30

Family Size
4

Health Impact Comparison

+0.9 years

Life expectancy gain per person

	DELHI	BENGALURU	DIFFERENCE
Annual PM2.5	100 <small>µg/m³</small>	48 µg/m ³	-52 (52%)
WHO Multiple	200x	9.6x	↓
Cigarette Equiv.	4.5/day	2.2/day	-2.4/day
Family Impact (4 people)			+3.6 life-years

Moving from Delhi to Bengaluru would reduce your family's PM2.5 exposure by 52%, equivalent to gaining 3.6 life-years collectively.

C H A P T E R

Chapter 5

Policy & accountability

The political teeth of the platform. Where money goes, what is announced versus what works, who is responsible, and how to ask harder questions.

Policy Tracker

Evidence-graded effectiveness of every major intervention

- **Headline table:** Odd-Even (-2 to -4%, weak evidence), BS-VI Fuel Standards (-10 to -15%, strong), GRAP Stage IV (-15 to -20%, moderate), CNG Transition (-25%, strong), Stubble Burning Bans (no change, strong), Smog Towers (negligible, strong).
- **GRAP since Dec 2024** uses predictive activation via 3-day IMD/IITM forecasts rather than reactive triggers; CAQM invoked Stage-I off-season for the first time on 19 May 2026.
- Each row links to its underlying source (IIT Delhi, TERI, CSE, CPCB evaluation reports) so a journalist can cite the original work rather than the table.
- **Citizen-side recommendations** on the same panel: 72-hour persistence rule for GRAP stages to stop yo-yo lifting; tighter NCR-vs-city triggering.

water-spraying – not the combustion sources that drive most PM2.5.

guideline = 5, Indian standard last revised in 2009.

causal dose-response from a domestic 7-district cohort.

Policy Effectiveness Tracker

Evaluating major air quality interventions by actual PM2.5 impact, evidence quality, and cost-effectiveness.

Intervention	Years	PM2.5 Impact	Evidence	Cost-Effectiveness
Odd-Even Scheme	2016, 2019	-2% TO -4%	WEAK	Low
BS-VI Fuel Standards	2020-	-10% TO -15%	STRONG	High
GRAP Stage IV	2024-25	-15% TO -20%	MODERATE	Medium
CNG Transition	2001-	-25%	STRONG	Very High
Stubble Burning Bans	2015-	NO CHANGE	STRONG	Very Low
Smog Towers	2021-	NEGLECTIBLE	STRONG	Very Low

Sources: IIT Delhi, TERI, CSE, CPCB evaluation reports

NCAP Fund Utilization

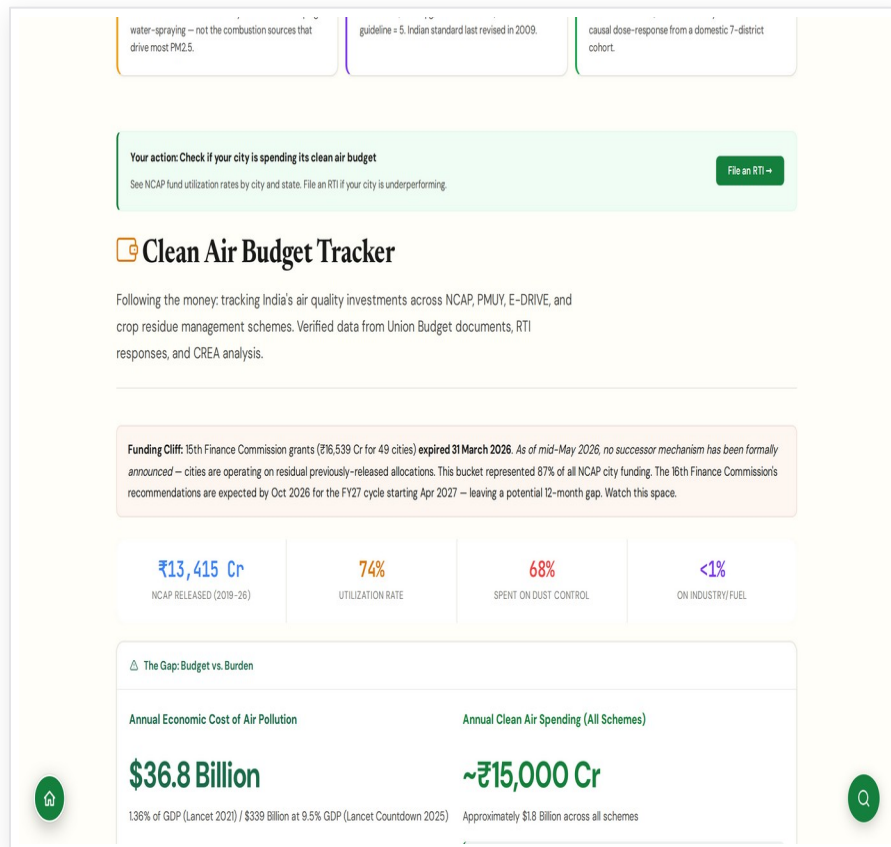
GRAP Stages Explained

- Dec 2024: GRAP now uses **predictive activation** (3-day forecast via IMD/IITM) instead of reactive triggers
- 19 May 2026: CAQM invokes Stage I at AQI 208 – **first-ever off-season** activation. GRAP is no longer winter-only.
- Stage I (201-300): Water sprinkling, dust control
- Stage II (301-400): DG set ban, parking fees 4x

Budget Tracker

Following the money, every air quality scheme, every rupee

- Funding cliff: 15th Finance Commission ₹16,539 Cr grants for 49 cities expired 31 March 2026; no successor framework announced.
- NCAP released ₹13,415 Cr (2019-26); utilisation rate 74%; 68% of spending on dust control, less than 1% on industry/fuel switching.
- Mismatch surfaced: annual economic cost ~\$36.8B (Lancet 2021) versus annual clean air spending ~₹15,000 Cr (~\$1.8B).
- Verified data from Union Budget documents, RTI responses, CREA analysis.



Political Accountability

Promises vs reality, named and dated

- Promises-vs-reality table: '40% PM2.5 reduction by 2026' (NCAP, 2019) → only 23/100 cities hit target; 'No conclusive data on pollution deaths' (Union Env Ministry, July 2024) → contradicts ICMR-Lancet studies; 'Stubble burning will end this year' (Punjab CM, 2021, 2022, 2023, 2024) → repeated every year; 'NCAP funds fully utilized' → Delhi at 17% per 2025 RTI.
- Each row carries the speaker, date, and a current-status flag (FAILED / CONTRADICTED / PARTIAL / WASTED); linked to the original press release or RTI response.
- Anchors the CREA 'Tracing the Hazy Air' NCAP progress report (9 Jan 2026): 103/231 cities still exceed PM2.5 standards, 28/130 NCAP cities still lack continuous monitoring after seven years.
- Non-partisan by design: the same evidence frame applies to every state and party.

water-spraying – not the combustion sources that drive most PM2.5.

guideline = 5, Indian standard last revised in 2009.

causal dose-response from a domestic 7-district cohort.

Political Accountability Tracker

Tracking promises, court orders, budget allocations, and outcomes. **NEW:** Clean Air Mission

Tracker with independent verification of NCAP interventions. Use RTI to demand transparency.

Democracy requires accountability.

Promises vs Reality

Statement/Promise	By Whom	Date	Status
'No conclusive data on pollution deaths'	Union Environment Ministry	July 2024	CONTRADICTS ICMR-LANCET STUDIES
'Delhi's air will be clean within 3 years'	Delhi CM	2020	FAILED
'40% PM2.5 reduction by 2026'	MoEFCC (NCAP)	2019	25-27% ACHIEVED (CREA)
'Stubble burning will end this year'	Punjab CM	2021, 2022, 2023, 2024	REPEATED EVERY YEAR
'Smog towers will solve pollution'	DPCC/IT	2021	230CR WASTED
'1000 electric buses by 2023'	Delhi Transport	2021	-400 DEPLOYED
'All brick kilns will use zigzag tech'	CPCB	2019	30% COMPLIANCE
'Real-time source apportionment'	MoEFCC	2022	50/100 CITIES ONLY
'Odd-even will reduce pollution 15%'	Delhi Govt	2016	2-4% ONLY (RT STUDY)
'NCAP funds fully utilized'	MoEFCC/States	2019-25	DELHI: 17% (RTI 2025)
'NCAP 40% reduction in 100 cities'	MoEFCC (NCAP)	2019	ONLY 23/100 MET TARGET (CREA 2026)
'Comprehensive monitoring in NCAP cities'	CPCB	2019	28/130 CITIES STILL NO CAAQMS (2026)
'Action on CAQM recommendations'	Delhi/NCR States	Jan 2026	SC: 4-WEEK DEADLINE (JAN 21)

CREA 'Tracing the Hazy Air' – NCAP Progress Report

CREA - 9 JAN 2026

Industrial Sources

The compliance gap, in numbers

- 30% industrial contribution to NCR PM2.5 (TERI-ARAI); 1,700+ industries in Delhi-NCR operating without consent (DPCC); 11 coal power plants within 300km of Delhi.
- ~45,000 brick kilns across the Indo-Gangetic Plain; only ~30% converted to cleaner zig-zag technology; conventional bull-trench kilns emit 20-40 tonnes PM annually each.
- Continuous Emission Monitoring Systems (CEMS) installed at only ~4,200 of ~8,500 mandated industrial units (49%); CPCB's own audit found 30% of installed CEMS show 'suspect' data patterns.
- Enforcement: only 128 closure notices issued in 2024-25 across all of India for emission violations; FGD deadlines for thermal plants extended three times since 2017 (current: December 2027).

water-spraying – not the combustion sources that drive most PM2.5.

guideline = 5, Indian standard last revised in 2009.

causal dose-response from a domestic 7-district cohort.

Industrial Sources & Corporate Accountability

Source apportionment studies consistently show industry contributes 20-30% of Delhi-NCR PM2.5. Yet industrial compliance remains opaque. Which plants violate norms? How often are they penalised? This section tracks the institutional accountability gap.



Sector-wise Contribution

Power plants: 11 thermal power plants within 300km of Delhi. CREA analysis found these contribute ~15% of regional SO2 and significant PM. FGD (flue gas desulphurisation) deadlines have been extended three times since 2017. Current deadline: December 2027.

Brick kilns: ~45,000 operational brick kilns in Indo-Gangetic Plain. Only ~30% converted to zig-zag technology (cleaner). Fixed chimney bull trench kilns still dominate. Each conventional kiln emits 20-40 tonnes PM annually.

Small-scale industry: Metal foundries, dyeing units, chemical processing in Wazirpur, Mayapuri, Bawana. Most operate below regulatory thresholds for emission monitoring. DPCC inspection capacity covers less than 5% of units annually.

Compliance Monitoring Gap

CPCB mandated Continuous Emission Monitoring Systems (CEMS) for 17 categories of polluting industries. Last verified Jan 2026, no public update since:

CEMS installed and reporting: ~4,200 of ~8,500 mandated units (49%)

Data quality issues: CPCB's own audit found 30% of installed CEMS showed 'suspect' data patterns

Enforcement actions: Only 128 closure notices issued in 2024-25 across all of India for emission violations

Penalty recovery: Environmental Compensation charges collected: Rs 186 Cr (2023-24) against an estimated Rs 12,000+ Cr in environmental damage

Mission Tracker (E1-E5)

Evidence-graded scoring of every announced intervention

- Original framework: every government intervention rated E1 (announced) to E5 (operational with measurable outcome).
- Promise vs reality, with verdicts: Anti-Smog Guns (200 deployed, ₹58 Cr) reduce AQI 5-10 points in immediate vicinity only, IIT Delhi called them 'cosmetic'; road mechanised sweeping (68% of NCAP budget) tackles dust but not the primary PM2.5 sources; e-bus procurement is the bright spot but Delhi's 6,000-by-Dec-2026 target is running behind.
- NCAP deadline elapsed: 40% target, 23/100 cities hit (CREA Jan 2026), 37/131 at 20% (CSE Apr 2026); Guttikunda et al. 2024 documented 'no change in the fraction of cities above 150 µg/m³' between 2019 and 2023.
- Headline indictment: 64% of NCAP funds went to road-dust suppression (CSE Five-Year Review), not the combustion sources that drive most PM2.5.

water-spraying – not the combustion sources that drive most PM2.5.

guideline = 5, Indian standard last revised in 2009.

causal dose-response from a domestic 7-district cohort.

🎯 Clean Air Mission Tracker

Correlating government-announced pollution control measures with actual air quality outcomes. The central question: are these interventions delivering results, or are they performative compliance?

NCAP Target vs. Reality – Deadline Missed

31 March 2026 deadline elapsed; CSE five-year review, Apr 2026

Deadline elapsed. The NCAP target of 40% PM10 reduction by 31 March 2026 has passed. **23 of 100 cities** with sufficient monitoring data met the target (CREA, Jan 2026). The April 2026 CSE Five-Year Review revises the count to **37 of 131 cities** hitting the original 20% reduction target. No revised programme has been announced as of mid-May 2026.

40%

TARGET PM10 REDUCTION (VS. 2017 BASELINE)

23/100

CITIES THAT MET TARGET (CREA, JAN 2026, 100 CITIES WITH SUFFICIENT DATA)

68%

NCAP FUNDS SPENT ON ROAD DUST CONTROL

<1%

SPENT ON INDUSTRIAL EMISSION CONTROL

NCAP's 31 March 2026 deadline for 40% PM10 reduction across 131 non-attainment cities has elapsed with the programme far short of its target. Guttikunda et al.'s 2024 analysis (examining 2019–2023 data) documented 'no change in the fraction of cities above 150 µg/m³' for PM10. The programme's spending priorities – overwhelmingly tilted toward road dust rather than transport, industry, or biomass – explain much of this underperformance. The CSE Five-Year Review (April 2026) found that 64% of NCAP funds went to dust suppression, not combustion sources. See the Resources panel for the CSE review.

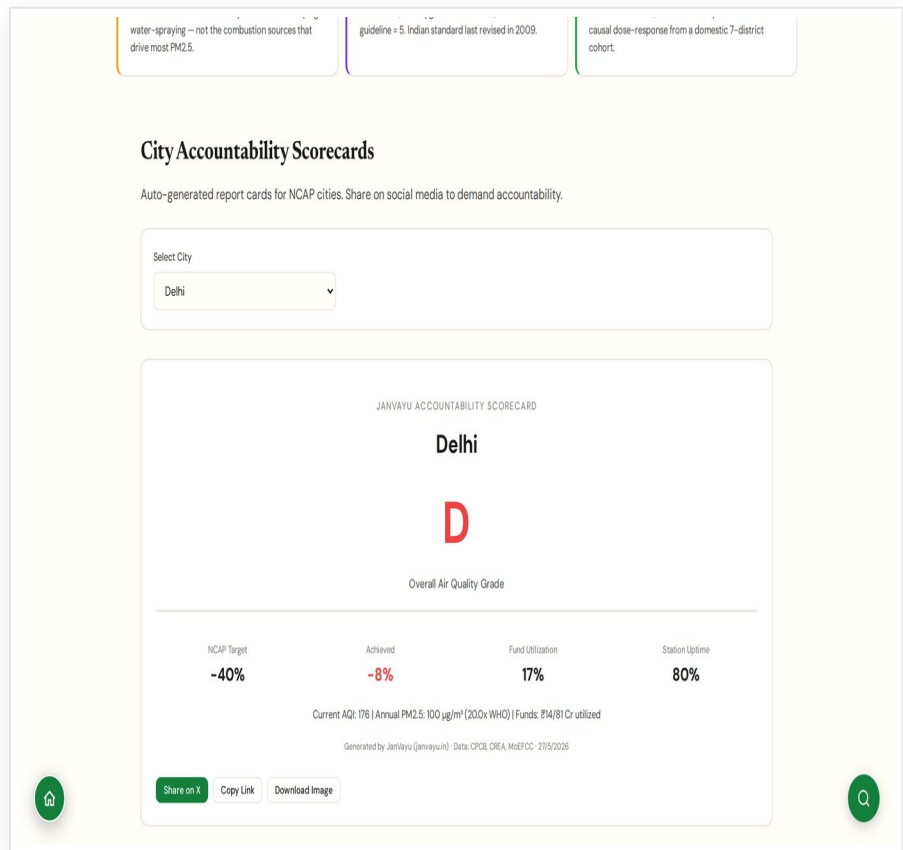
Promise vs. Reality: Key Interventions

GRAP Effectiveness Audit

City Scorecards

City and state report cards in one page each

- Per city/state: current and historical PM2.5, NCAP fund utilisation, scheme rollout, accountability flags.
- Designed for one-click sharing with journalists, councillors, and parliamentarians.
- Letter grades synthesise the underlying evidence, but each grade links to its supporting data.
- Updated monthly; revision dates shown explicitly.



Accountability Brief

AI-generated, ward-level briefs for councillors, journalists, and resident groups

- Input the city plus the ward or area; the AI generates a localised brief with live AQI, seasonal baseline comparison, and actionable recommendations.
- Designed to be shareable: a councillor gets a ward-specific summary; a journalist gets a tip-sheet with citations; an RWA gets a memo for the next meeting.
- Grounded in live data with primary-source citations (CPCB, IQAir, Lancet Countdown, AQLI, CREA); the AI composes, it does not invent numbers.
- Pulls from RTI responses, CPCB notices, NGT orders, and parliamentary questions in the background so the brief carries documentary evidence, not just commentary.

water-spraying – not the combustion sources that drive most PM2.5.

guideline = 5, Indian standard last revised in 2009.

causal dose-response from a domestic 7-district cohort.

Your action: Generate a data-backed brief for your ward
Enter your city and area below. Share the AI-generated brief with your councillor or media.

Generate a Ward-Level Accountability Brief AI POWERED

For ward councillors, journalists, and resident groups. AI-generated briefs grounded in live data with seasonal baselines and actionable recommendations.

Brief Parameters

City
Delhi

Area / Ward
e.g. Anand Vihar, Rohini, Dharavi

Period
Today

Generate Brief

Your accountability brief will appear here..

Clean Air Wins

What's actually moved the needle: verified, not press-released

- 4,286 e-buses in Delhi (largest fleet in India, verified Feb 9 2026); 26.8% nationwide PM reduction in NCAP cities 2019-2024 (NCAP aggregate); 62,219 excess deaths avoided across 20 cities 2018-2022 (IIT Kharagpur).
- Varanasi is the NCAP top performer: 76.4% PM10 reduction. Caveat: 84% of Varanasi's pollution was dust; PM2.5 from combustion sources remains stubbornly high.
- May 2026 policy wins: CAQM's first off-season GRAP Stage-I (19 May 2026); NGT directs six south-Indian states to file sector-wise PM roadmaps (Apr 2026); NGT nationwide notices to SPCBs on diesel-generator retrofit non-compliance (9 Apr 2026).
- Honest about what 'wins' means: none of these is itself a measured PM2.5 reduction; they are policy and enforcement moves that, if implemented, would produce reductions.

water-spraying – not the combustion sources that drive most PM2.5.

guideline = 5, Indian standard last revised in 2009.

causal dose-response from a domestic 7-district cohort.

Clean Air Wins

Accountability means tracking what works, not just what fails. This section documents genuine progress, successful interventions, citizen victories, and policy moves worth watching. Verified against independent data.

4,286

E-BUSES IN DELHI (LARGEST IN INDIA, VERIFIED FEB 9, 2026)

26.8%

NATIONWIDE PM REDUCTION 2019-2024 (NCAP AGGREGATE)

62,219

EXCESS DEATHS AVOIDED IN 20 CITIES (IIT KHARAGPUR, 2018-2022)

6

SOUTH-INDIAN STATES ORDERED TO FILE SECTOR-WISE PM ROADMAPS (NGT, APR 2026)

Update – May 2026

Three policy/enforcement wins in the last six weeks that genuinely move the needle on the accountability side of clean-air work:

- **CAQM – first-ever off-season GRAP Stage-I invocation** (19 May 2026). Delhi–NCR’s emergency response framework, designed for winter inversions, was invoked in May for the first time at an AQI reading of 208. Signals year-round enforcement, not just October–March. Stage-I was briefly revoked on 4 May and re-invoked 15 days later as the heatwave-pollution interaction worsened. See [CAQM order index](#).
- **NGT – six south-Indian states directed to file PM roadmaps** (Apr 2026). For the first time, the National Green Tribunal has tied state budgets to sector-wise PM10/PM2.5 cuts in Tamil Nadu, Kerala, Karnataka, Andhra Pradesh, Telangana and Puducherry. *Shifts the policy frame beyond the Indo-Gangetic Plain*. DTE Court Digest.
- **NGT – nationwide SPCB notices on diesel-generator retrofit non-compliance** (9 Apr 2026). Establishes accountability beyond NCR – every State Pollution Control Board now on notice. *Next hearing: 21 July 2026*.

All three items live in full in the [Resources panel](#) → [May 2026 Updates](#). The ‘wins’ framing is honest: none of these is a reduction in PM2.5. They are policy and enforcement moves that, if implemented, would produce reductions.

Cities Showing Real Progress

Q

Legal Framework

Constitutional rights, key judgments, and the statutory powers actually available

- Article 21 → Right to Clean Air: traced from Subhash Kumar v. State of Bihar (1991) through the M.C. Mehta line (1987 absolute liability), with Vellore Citizens v. UoI (1996) establishing Polluter Pays.
- M.K. Ranjitsinh v. Union of India (2024) reframes the question: there is now a fundamental right against climate degradation, which folds air pollution into the constitutional rights frame.
- Statutes that actually carry teeth: EPA 1986 §3 & §5 (closure of any industry), CAQM Act 2021 §14 & §15 (overrides state orders, fines up to ₹1 Cr, 5 years imprisonment), Air Act 1981 §31(A), MV Act 1988 §190(2).
- GRAP itself is judicially mandated: the Supreme Court structures Delhi-NCR's emergency response and reviews CAQM enforcement on a continuing basis.

water-spraying – not the combustion sources that drive most PM2.5.

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causal dose-response from a domestic 7-district cohort.

Legal Framework for Clean Air

Constitutional rights, Supreme Court mandates, and statutory powers that provide the legal basis for emergency action on air pollution.

Constitutional & Judicial Basis

Article 21: Right to Life = Right to Clean Air

Subhash Kumar v. State of Bihar (1991): Supreme Court declared that the right to life encompasses the right to enjoy pollution-free water and air.

Polluter Pays Principle

Vellore Citizens v. UOI (1996): Integrated Precautionary and Polluter Pays Principles. Justifies pollution cess, fines on violators.

Right Against Climate Degradation (2024)

M.K. Ranjitsinh v. Union of India (2024): Fundamental right against climate degradation – frames air pollution as constitutional rights defense.

Absolute Liability

M.C. Mehta v. UOI (1987): Industries in hazardous activities are strictly liable regardless of negligence.

Statutory Framework – Key Acts & Powers

Act/Body	Key Provision	Power Granted
EPA, 1986	Section 3 & 5	Closure of any industry; stoppage of electricity/water
CAQM Act, 2021	Section 14, 15	Prevails over state orders; fines up to ₹1 crore; 5 years imprisonment
Air Act, 1981	Section 31(A)	Binding orders on specific pollution sources
MV Act, 1988	Section 190(2)	Mandatory PUC; fines up to ₹10,000; fuel denial

RTI Assistant

Pre-built RTI templates for air quality accountability

- Templates for: NCAP city action plan utilisation, GRAP enforcement records, industrial consent compliance, school closure decisions.
- Each template is structured to the right authority (CPCB, SPCB, ULB, MoEFCC) and includes the relevant legal citation.
- Output is a downloadable RTI ready to post or upload, with the fee and address pre-filled.
- Companion panel to Mission Tracker: when a claim is E1, the RTI template is the path to E2.

water-spraying – not the combustion sources that drive most PM2.5.

guideline = 5, Indian standard last revised in 2009.

causal dose-response from a domestic 7-district cohort.

Your action: Generate an RTI letter you can file today

Select a topic and your state – get a ready-to-file RTI application in English or Hindi.

RTI Filing Assistant

Generate ready-to-file RTI applications for air quality information from your state and district.

Build Your RTI

Your Name

Your Address

State

Topic

[Generate RTI Application](#)

Preview

[Copy](#)

APPLICATION UNDER RIGHT TO INFORMATION ACT, 2005

To,

The Public Information Officer,
[State Pollution Control Board],
[Address]

Date: 27 May 2026

Subject: Request for Information under RTI Act, 2005

Sir/Madam,

I, [YOUR NAME], resident of [YOUR ADDRESS], hereby request the following information under Section 6(1) of the Right to Information Act, 2005:

- Total NCAP funds allocated to this state/city from 2019-20 to 2025-26 (year-wise).
- Amount utilized under each head (monitoring, road dust, transport, waste management) with percentage utilization.

C H A P T E R

Chapter 6

Citizen action

From data to motion. The advocacy, organising, education, and communication side of the platform.

Take Action

From data to motion: actions sized to context and budget

- Your-Home-GRAP framework: a household response plan keyed to AQI bands (0-50 to 400+), with concrete actions for each level for the home, for kids and elderly, and for outdoor activity.
- Actions organised by budget tier: ₹0 (wet mopping cuts indoor PM by 20-30%, sealing gaps, cooking-timing); ₹1-5K (N95 masks, DIY Corsi-Rosenthal box); ₹5-50K (HEPA purifier per room, sealed windows).
- Each action links to the JanVayu panel or template that completes it (RTI, scorecards, exposure report) rather than free-floating advice.
- Tracked-action metrics (anonymised) build social proof: RTIs filed, scorecards downloaded, alerts subscribed.

water-spraying – not the combustion sources that drive most PM2.5.

guideline = 5, Indian standard last revised in 2009.

causal dose-response from a domestic 7-district cohort.

Your action: Pick one thing and do it today

File an RTI, write to your councillor, get an air purifier, or share data with your community.

[Generate RTI →](#)

⚡ Take Action – What You Can Do

Practical, science-backed actions at every level – from your home to your community.
Organized by context and budget. Every small action compounds.

[🏠 Your Home GRAP – Personal Emergency Response](#)

Just like the city has GRAP stages, create your own household response plan based on AQI levels.

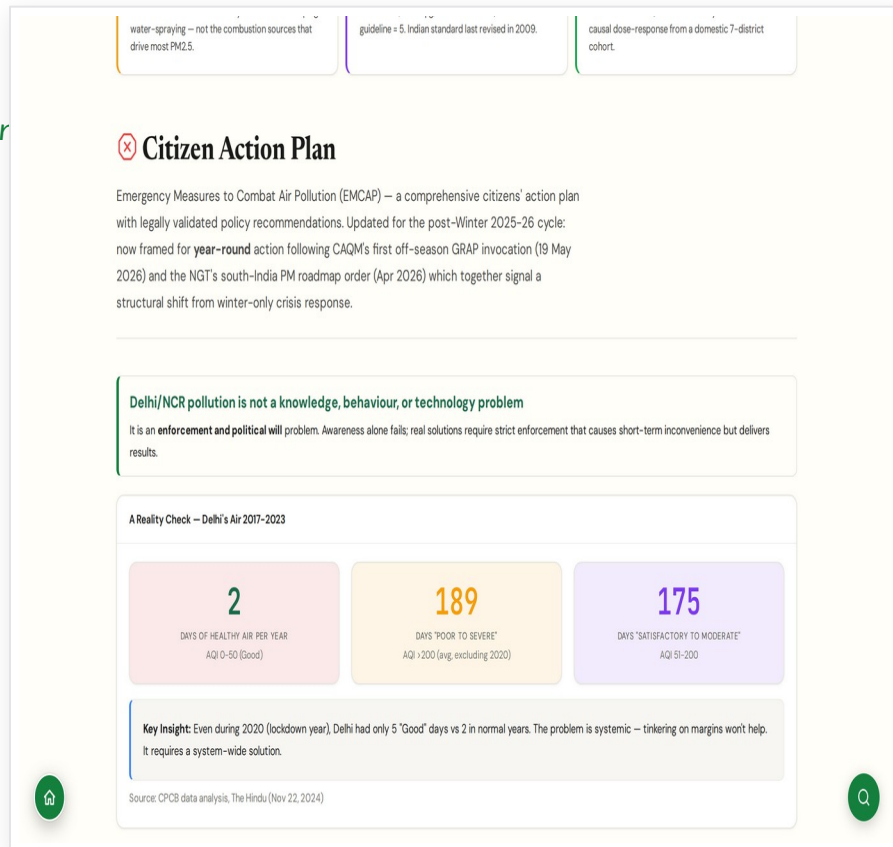
AQI Level	Your Home Response	Kids & Elderly	Outdoor Activity
0-50 Good	Normal activities. Open windows for ventilation.	All activities normal	All outdoor activities
51-100 Moderate	Sensitive individuals limit prolonged outdoor exertion	Reduce intense outdoor play	Limit strenuous exercise
101-200 Poor	Keep windows closed. Run air purifier if available.	Indoor play preferred	No jogging/cycling outdoors
201-300 Very Poor	Seal windows. Wet mop floors. N95 if going out.	Stay indoors. No school commute if possible.	Essential trips only with N95
301-400 Severe	DIY air filter running. Damp towels on gaps. Mask indoors if no purifier.	Consider staying with relatives in cleaner area	Stay home. Work from home if possible.
400+ Hazardous	Emergency mode. Multiple purifiers. Consider temporary relocation.	Relocate if child/elderly has respiratory condition	Complete lockdown. Emergency only.

[🏠 Household Actions – By Budget](#)

Citizen Plan

EMCAP: Emergency Measures to Combat Air Pollution, citizen edition

- Reframed in May 2026 as year-round after CAQM's first off-season GRAP-I (19 May) and the NGT's south-India PM roadmaps order (Apr 2026).
- Reality-check anchor: Delhi 2017-2023 averaged 2 days of healthy air per year (AQI 0-50), 189 days 'poor to severe', 175 days 'satisfactory to moderate' (CPCB / The Hindu, Nov 2024).
- Source apportionment for Delhi internal sources: vehicles 34%, biomass and domestic 22%, dust 18%, industry 14%, other 12%. Externals add to that during winter inversion.
- Position: 'Delhi/NCR pollution is not a knowledge, behaviour, or technology problem; it is an enforcement and political-will problem.' Awareness alone fails.



Citizen Voices & Viral Moments

Live social-media coverage plus tracked voices and a curated archive

- Auto-pulls Reddit, X/Twitter, and news every 15 minutes; surfaces searches for #DelhiAirPollution, #DelhiSmog, #AirPollutionIndia by default.
- Tracks key individual voices in the field: Anumita Roychowdhury (CSE), Sunil Dahiya (CREA), and other named researchers and journalists.
- Curated archive: hand-picked stories that crystallised a moment (CAQM's first off-season GRAP-I, Lancet Countdown 2025 India release, Loni topping IQAir).
- Filterable by source type (regulator notice, research finding, citizen post, journalist piece) and by date.

The screenshot displays the 'Citizen Voices & Viral Moments' web application. At the top, there are three highlighted snippets: 'water-spraying – not the combustion sources that drive most PM2.5', 'guideline = 5, Indian standard last revised in 2009', and 'causal dose-response from a domestic 7-district cohort'. Below these is the main title 'Citizen Voices & Viral Moments' with a speech bubble icon. A subtitle reads 'Live from social media + curated highlights. Auto-updates from Reddit, X/Twitter, and news sources.' The main content area is titled 'Latest Social Media Coverage' and shows a loading state with the text 'Loading recent social-media coverage of Indian air quality...'. Below this is a filter bar with buttons for 'Reddit', 'X/Twitter', 'News', and 'All', and a note 'Auto-refreshes every 15 min'. The 'Curated Highlights & Key Moments' section features two entries: 'CAQM – First Off-Season GRAP Invocation' (REGULATOR) and 'Lancet Countdown 2025 Launch – India Chapter' (RESEARCH). The CAQM entry includes a detailed paragraph about the GRAP Stage-I activation on May 19, 2026, and a date '19 May 2026 | CAQM Order Index | caqm.in'. The Lancet entry includes the text 'Annual figure revised upward: 1.72 million Indian deaths per year attributable to ambient PM2.5 (from 1.5M previously) -- ~70% of the global'. The interface includes a home icon at the bottom left and a search icon at the bottom right.

Workshops

Two routes: *Dr Sarath Guttikunda's external sessions or a free JanVayu walkthrough*

- External Air Quality Jeopardy and lecture sessions by Dr Sarath Guttikunda (UrbanEmissions.info), priced and scheduled directly by him; the request form on the panel relays your details and audience type.
- Free hands-on JanVayu walkthrough run by the platform team: how to read AQI, how to file an RTI, how to set up a school dashboard.
- Audience presets: Class 9-12 students, college, adult cohorts (RWA, NGO, professionals), educators, mixed groups. Formats range from the Jeopardy game to lecture to hands-on JanVayu data work.
- Companion to the Learning Games panel, which packages the same content for self-study and classroom use without a facilitator.

water-spraying – not the combustion sources that drive most PM2.5.

guideline = 5, Indian standard last revised in 2009.

causal dose-response from a domestic 7-district cohort.

Workshops

Air pollution is easier to act on once you understand it. Two ways to learn: an interactive Air Quality Jeopardy session with Dr. Sarath Guttikunda (UrbanEmissions) – scheduled and priced directly by him – or a free hands-on JanVayu walkthrough with our team.

1-hour JanVayu walkthrough

JanVayu team

Hands-on session

Live walkthrough of the dashboard. Set AQI alerts for your city, file an RTI in one sitting, read the NCAP scorecard, and find the right purifier for your room. Free, online, English/Hindi. Up to 25 participants.

Your name * Email *

Group context Approx. attendees

Your 3 preferred slots (ST)

Pick three options – we'll confirm one of them. Format: "Tue 6 May, 7-8 PM."

1st preference

2nd preference

3rd preference

Language preference

Air Quality workshop with UrbanEmissions

External facilitator - fee set by facilitator

Air Quality Jeopardy and more

Dr. Sarath Guttikunda of UrbanEmissions.info runs interactive sessions on air quality science, sources, and policy – including a Jeopardy-format game tested with school and adult cohorts. Choose Class 9+ students, college, or adult learners. Pricing and scheduling are set directly by Dr. Guttikunda; we relay your request and he'll respond with terms. *If you'd like a self-paced taste of the format first, try the Learning Games panel.*

Your name * Email *

Organisation / school

Audience Group size

Preferred format

Pricing Preferred dates

Learning Games

Seven games, original India-context content, browser-playable

- Seven-game suite: Air Quality Jeopardy (India edition, 5 categories × 25 clues, ₹75,000 max), PM Quick-Quiz (10 questions), Source Matcher, Snakes & Ladders (Moksha Patam-style), Jodi Match memory cards, Air Tambola (Housie), and the new Vayu Junction word-grouping puzzle.
- Inspired by the long-running classroom Air Quality Jeopardy Dr Guttikunda runs live; by Moksha Patam (the original Indian Snakes & Ladders); by the household games every Indian grew up with; and Only Connect-style word grouping for Vayu Junction.
- Designed for school and college audiences; aligned to CBSE/state environmental studies syllabi; works on low-bandwidth connections with no install or account required.
- Vayu Junction (newest, May 2026) seeds the pollutant, policy, and source vocabulary that the rest of the site uses.

The screenshot displays the 'Learning Games' interface. At the top, there are three informational boxes: 'water-spraying – not the combustion sources that drive most PM2.5.', 'guideline = 5, Indian standard last revised in 2009.', and 'causal dose-response from a domestic 7-district cohort.' Below these is the title 'Learning Games' with a menu icon. A paragraph describes the suite of seven short games for self-study, classrooms, and family screen time, all with original India-context content. It lists the games: Air Quality Jeopardy (India edition), PM Quick-Quiz (10 Q), Source Matcher, Snakes & Ladders, Jodi Match (cards), Air Tambola, and Vayu Junction (marked as 'NEW'). Below the text is a navigation bar with buttons for each game. The 'Air Quality Jeopardy – India edition' game is selected and expanded, showing its details: '5 categories · 25 clues · up to ₹75,000'. It explains the game mechanics: 'How it works. Twenty-five tiles are arranged in five categories – Sources, Health, Policy, Cities, Action – with values from ₹1,000 to ₹5,000. Click any tile to see a statement; that statement is the answer. Your job is to think of the question it answers. (For example: tile says 'This Indian city was named the most polluted capital in the world in IQAir 2025' – the matching question is 'What is New Delhi?') Reveal the official answer, mark whether you got it, and earn the rupee value of the tile. Clear all 25 to top out at ₹75,000. Score is saved locally on your device only.' Below the text is a score display: 'Score: 20 Solved: 0/25' and a 'Reset board' button. At the bottom, there is a grid of five categories: SOURCES, HEALTH, POLICY, CITIES, and ACTION. Each category has a corresponding value of ₹1,000. A home icon is on the bottom left and a search icon is on the bottom right.

Social Media Feed

Live, filterable, multi-platform air quality coverage

- Aggregates posts from X/Twitter, Reddit, and Bluesky on Indian air quality, refreshing every 15 minutes.
- Filters: city, source type (citizen, regulator, NGO, journalist), language.
- Useful as an early-warning system: regional fire events and inversions often surface on social first.
- All posts cite the original source; JanVayu does not repost or scrape content without attribution.

water-spraying – not the combustion sources that drive most PM_{2.5}.

guideline = 5, Indian standard last revised in 2009.

causal dose-response from a domestic 7-district cohort.

Live Social Media Feed

Auto-updating posts about India's air quality from X/Twitter, Reddit, Instagram, and YouTube. Refreshes every 15 minutes. Powered by Agent-Reach.

All Reddit X/Twitter Instagram YouTube News Refresh

X/TWITTER just now
Search #DelhiAirPollution on X
Live search results for Delhi air pollution discussions on X/Twitter. Click to see the latest posts.

X/TWITTER just now
Search #DelhiSmog on X
Trending discussions about Delhi smog and air quality crisis.

X/TWITTER just now
Search #AirPollutionIndia on X
Pan-India air pollution discussions, policy debates, and citizen reports.

X/TWITTER just now
@ABOROMOHANTY (CSE)
Anumita Roychowdhury, CSE – leading air quality researcher and policy advocate.

X/TWITTER just now
@suaboromohanty (CREA)
Sunil Dahiya, CREA analyst – data-driven air quality analysis.

INSTAGRAM just now
#DelhiPollution on Instagram
Visual stories and citizen reports of Delhi air pollution. Photos from the ground.

INSTAGRAM just now
#DelhiSmog on Instagram
Smog visuals, before/after comparisons, and air quality awareness posts.

INSTAGRAM just now
#AirQualityIndia on Instagram
National conversation on air quality – infographics, awareness campaigns.

INSTAGRAM just now

Live News

Air-quality news from Indian and international press

- Curated news feed pulling from PIB, The Hindu, Indian Express, Times of India, Reuters, AP, and others.
- Filtered to substantive coverage; tags applied (policy, health, science, court, local government).
- Auto-refreshes every 4 hours; cached headlines work offline.
- For anyone producing media reviews this saves an hour a day of manual scanning.

The screenshot shows a web application titled "Live Air Quality News". At the top, there are three informational boxes: "water-spraying – not the combustion sources that drive most PM2.5.", "guideline = 5, Indian standard last revised in 2009.", and "causal dose-response from a domestic 7-district cohort." Below these is the main heading "Live Air Quality News" and a sub-heading "Auto-updating news from GDELT, Google News, and Reddit. Covers Indian and global air quality coverage." There are filter buttons for "All", "India", "Delhi/NCR", "Policy", and "Health", and an "Updated: 04:35 am" timestamp. The main content area displays a list of news items, each with a headline, a snippet, a source, and a time ago. The items are:

- Government acts on Delhi dust: More machine sweepers to tackle air pollution – The Indian Express (5h ago)
- Delhi AQI touches 'very poor' for first time after Feb | Latest News Delhi – Hindustan Times (5h ago)
- Environment minister reviews actions to improve Delhi-NCR air quality – The News Mill (6h ago)
- Below 75% fund utilisation: CPCB pulls up Delhi on NCAP gaps | Latest News Delhi – Hindustan Times (6h ago)
- Air quality plan gets deadline-driven push – MillenniumPost (8h ago)
- Yadav Reviews Delhi's Air Pollution Action Plan, Pushes Faster Implementation Before Winter – Devdiscourse (11h ago)
- Emphasis on Swift Measures to Combat Delhi's Air Pollution – Devdiscourse (12h ago)

 The interface includes a home button at the bottom left and a search button at the bottom right.

C H A P T E R

Chapter 7

Tools & knowledge

The reference layer: AI assistant, embeddable widgets, glossary, research library, downloads, and the open data archive.

Ask JanVayu (AI)

Live-data-grounded chatbot in 10 Indian languages, citing primary sources

- Ten Indian languages selectable inline: English, हिन्दी, தமிழ், বাংলা, मराठी, తెలుగు, ગુજરાતી, ಕನ್ನಡ, മലയാളം, ਪੰਜਾਬੀ. Covers roughly 95% of mother-tongue speakers.
- Wires four live data sources (live AQI, rankings, historical trends, community sensors); runs seven deterministic calculators (cigarette equivalence, mortality risk, life-years lost, migration benefit, transport exposure, purifier CADR, school closure forecast); drafts six RTI templates.
- Every answer cites a primary source (CPCB, IQAir, Lancet Countdown, AQLI, CREA, Sensor.Community); methodology block addresses 'why do two sources disagree' (CPCB vs US EPA AQI, WAQI vs CPCB network, Krishna 1.5M vs Lancet 1.72M).
- Built on Llama 3.3 70B via Groq; in-page widget plus a standalone PWA at janvayu.in/ask/ with conversation history.

water-spraying — not the combustion sources that drive most PM2.5.

guideline = 5, Indian standard last revised in 2009.

causal dose-response from a domestic 7-district cohort.

Ask JanVayu AI - SOURCES CITED

Live AQI · health & exposure calculators · city rankings & trends · source apportionment · RTI drafts · multi-source reliability checks. Every answer cites a primary source (CPCB, IQAir, Lancet Countdown, AQLI, CREA, Sensor.Community). Available in **10 Indian languages** — English, हिन्दी, தமிழ், বাংলা, मराठी, తెలుగు, ગુજરાતી, ಕನ್ನಡ, മലയാളം, ਪੰਜਾਬੀ.

For the full chat experience with conversation history and PWA install, open [ask/](#) →

Try one of these — tap a chip to load the question

Should I go jogging today? | Top 5 worst Indian cities right now | I commute 2 hours by auto — what's my exposure? | Where does pollution come from?

Draft an RTI about brick kilns | How reliable is today's reading? | How many cigarettes today? | Has Mumbai gotten worse since 2019? | Should I move from Delhi to Bangalore?

Compare Delhi vs Bangalore

Your Question

City (live AQI source)

Delhi

Language (response language)

English

Your Question

e.g. Should I go jogging today? · Top 5 worst cities · Draft an RTI.

Answer

Response will appear here...

Tools

Embeddable widgets, PM2.5/AQI converters, exporters

- Embed widget generator: choose a city and a size; receive an iframe snippet for school sites, RWA pages, blogs.
- PM2.5 to AQI converters for both Indian NAAQS and US EPA AQI formulae, both are used in citation.
- Data export: download any panel's underlying data as CSV/JSON for further analysis.
- API endpoint documented for developers building on top of JanVayu.

water-spraying – not the combustion sources that drive most PM2.5. | guideline = 5, Indian standard last revised in 2009. | causal dose-response from a domestic 7-district cohort.

Tools & Utilities

Tools for researchers, journalists, developers, and citizens to access, embed, and analyze air quality data.

Data Export

Download current AQI data for research and analysis.

JSON, CSV formats | For: Researchers, Journalists

Includes: City, AQI, PM2.5, PM10, station, timestamp.

Download JSON | Download CSV | API Info

Embeddable Widget

Display live AQI on your website, blog, or app.

Auto-updates | For: Bloggers, Schools, NGOs

City: Delhi | Size: Small (200x100) | Generate Code

PM2.5 to AQI Converter

Convert raw PM2.5 (ug/m3) to India NAQI and US EPA AQI scales.

PM2.5 (ug/m3): e.g., 150 | India AQI (NAQI): -- | US AQI (EPA): --

Glossary

Every air-quality term, plainly defined, with a 'simpler language' toggle

- Categorised entries: Measurements (PM2.5, PM10, $\mu\text{g}/\text{m}^3$, AQI, GEMM), Policies & Institutions (NCAP, GRAP, CPCB, CAQM, NAAQS, PRANA), Methods (FIRMS, AOD, source apportionment).
- A 'Switch to simpler language' toggle rewrites each entry into one-line plain English, useful for school and RWA outreach.
- Keyboard-shortcut accessible (Ctrl+K) from any panel; entries cross-link to source papers and to the JanVayu panels where each term is used.
- Anchors AQI definitions to US EPA breakpoints (0-500 scale) since that's what WAQI publishes; PM2.5 anchored to WHO 2021 (5 $\mu\text{g}/\text{m}^3$ annual, 15 $\mu\text{g}/\text{m}^3$ 24-hour).

The screenshot shows a web application interface for a glossary. At the top, there are three small text boxes with definitions: 'water-spraying - not the combustion sources that drive most PM2.5', 'guideline = 5, Indian standard last revised in 2009', and 'causal dose-response from a domestic 7-district cohort'. Below these is a 'Glossary' section with a book icon and the text 'Key air quality terms, acronyms, and measurements explained in plain language.' A toggle switch labeled 'Switch to simpler language' is present. The main content is divided into two columns: 'Policies & Institutions' and 'Measurements'. The 'Policies & Institutions' column lists NCAP (National Clean Air Programme), GRAP (Graded Response Action Plan), CPCB (Central Pollution Control Board), CAQM (Commission for Air Quality Management), and RTI (Right to Information). The 'Measurements' column lists AQI (Air Quality Index), PM2.5 (Fine Particulate Matter), PM10 (Coarse Particulate Matter), $\mu\text{g}/\text{m}^3$ (Micrograms per cubic metre), and GEMM (Global Exposure Mortality Model). A home icon is in the bottom left and a search icon is in the bottom right.

Reading List

Zotero-backed open library of papers, reports, and datasets

- Currently 21 curated entries pulled live from Zotero: Lancet Countdown India, GBD, CREA, CSE, COALESCe network synthesis (Venkataraman et al. 2024), IIT-K source apportionment, UrbanEmissions.info.
- Each entry carries full bibliographic metadata plus abstract; searchable by topic, author, source-type, year.
- Every panel on JanVayu links to the subset of Reading List entries it relies on, and vice versa.
- Auto-syncs with Zotero so the canonical bibliography lives there, not in the panel; users can fork the collection.

water-spraying – not the combustion sources that drive most PM_{2.5}.

guideline = 5, Indian standard last revised in 2009.

causal dose-response from a domestic 7-district cohort.

Reading List

Curated, verified open-access resources from peer-reviewed studies, government portals, and research institutions.

Latest from Zotero 21 ITEMS IN LIBRARY

JOURNALARTICLE Zotero
Global PM_{2.5} exposures and inequalities
 Xu, Chenyang; Xia, Kaiming; Huang, Zhehan; Qu, John J.; Singh, Ashbindu; Ye, Ziqian; Li, Qingquan; Xia, Jihe (2025)

JOURNALARTICLE Zotero
Continued Rise in Health Burden from Ambient PM_{2.5} in India under SSP Scenarios Until 2100 despite Decreasing Concentrations
 Wang, Yiyi; Hu, Jianlin; Wu, Yangyang; Kota, Sri Harsha; Zhang, Hongliang; Gong, Kanglin; Xia, Xiaodong; Yue, Xu; Liao, Hong; Huang, Lei (2024)

JOURNALARTICLE Zotero
Drivers of PM_{2.5} Episodes and Exceedance in India: A Synthesis From the COALESCe Network
 Venkataraman, Chandra; Anand, Abhinav; Maji, Sujit; Barman, Neelidip; Tiwari, Dewashish; Muduchuru, Kaushik; Sharma, Arushi; Gupta, Ganesh; Bhardwaj, Ankur; Haswani, Diksha; Pullokaran, Delwin; Yadav, Kajal; Sunder Raman, Ramya; Imran, Mohid; Habib, Gazala; Kapoor, Taveen Singh; Anurag, Gupta; Sharma, Renuka; Phuleria, Harish C.; Qadri, Adnan Mateen; Singh, Gyanesh Kumar; Gupta, Tarun; Dhandapani, Abhishek; Kumar, R. Nareesh; Mukherjee, Sauryadeep; Chatterjee, Abhijit; Rabha, Shahadev; Saikia, Binoy K.; Saikia, Prasenjit; Ganguly, Dilip; Chaudhary, Pooja; Sinha, Baerbel; Roy, Sayantee; Muthalagu, Akila; Qureshi, Asif; Lian, Yang; Pandithurai, Govindan; Prasad, Laxmi; Murthy, Sadasheva; Duhan, Sandeep Singh; Laura, Jitender S.; Chhangani, Anil Kumar; Najjar, Tanveer Ahmad; Jehangir, Arshid; Kesarkar, Amit P.; Singh, Vikas (2024)
 Abstract Emission sources influencing high particulate air pollution levels and related mortality in India have been studied earlier on country-wide and sub-

JOURNALARTICLE Zotero
High-Resolution PM_{2.5} Emissions and Associated Health Impact Inequalities in an Indian District
 Tamar, Gaurav; Nagpure, Ajay Singh; Jain, Yash; Kumar, Vivek (2023)

Downloads

Slide decks, briefs, datasets, scorecard PDFs

- Ready-made decks for: school assemblies, RWA presentations, councillor briefings, journalist primers.
- Pre-built briefs by topic (NCAP, GRAP, school closures, occupational exposure) with citations.
- Bulk dataset downloads for researchers (historical CPCB, derived xWHO series, scorecard exports).
- Everything CC BY-NC-SA 4.0, free to reuse with attribution, non-commercial.

water-spraying – not the combustion sources that drive most PM_{2.5}.

guideline = 5, Indian standard last revised in 2009.

causal dose-response from a domestic 7-district cohort.

↓ Downloads & Documents

Downloadable reports, legal documents, RTI templates, and research briefs for offline use, advocacy, and filing.

Supreme Court Air Pollution Orders

Key SC orders on Delhi air quality: MC Mehta v. Union of India (ongoing), CAQM directions, GRAP enforcement orders. Via India Kanoon and SCI portal.

SCI Judgments Portal

GRAP Revised Framework 2024

Graded Response Action Plan for Delhi-NCR. Four-stage emergency measures (Stage I-IV) with AQI triggers and enforcement protocols. Official CAQM order.

Download PDF (CAQM)

RTI Template Pack

Pre-formatted RTI applications for CPCB, DPCC, MoEFCC, and CAQM. Print-ready with filing instructions.

View RTI Templates

Data Exports

Download current live AQI data for all monitored cities. Includes city, AQI, PM_{2.5}, PM₁₀, station name, and timestamp.

JSON CSV API Docs

NCAP Progress Report

CREA's assessment of NCAP implementation: fund utilization, city-wise progress, spending by category. Only 23/100 cities met targets.

CREA Report (Jan 2026)

IQAir World Air Quality Report

2024 global rankings. India 5th most polluted, avg PM_{2.5} of 50.6 ug/m³. 6 of 10 worst cities in India. Full methodology and city data.

View Report (IQAir)

Data Archive

Raw and processed time series, openly accessible

- Long-run station-level PM2.5/PM10 series sourced from CPCB CAAQMS and curated.
- Derived series: city-level daily means, ×WHO multipliers, scorecard inputs, GEMM calculations.
- Versioned: every dataset has a release date, a methodology note, and a citation suggestion.
- Useful for graduate research and for replicating any specific claim shown on the platform.

The screenshot displays the 'Historical Data Archive' interface. At the top, there are three text boxes with snippets of text: 'water-spraying – not the combustion sources that drive most PM2.5.', 'guideline = 5, Indian standard last revised in 2009.', and 'causal dose-response from a domestic 7-district cohort.' Below these is the title 'Historical Data Archive' and the subtitle 'Download air quality data snapshots for research and analysis.' The main interface is divided into two panels. The left panel, 'Generate Dataset', has a 'Cities' section with a scrollable list containing Delhi, Mumbai, Kolkata, Chennai, Bengaluru, Hyderabad, Gurgaon, and Nriia. Below this is a 'Format' dropdown menu set to 'CSV (Excel-compatible)'. A green 'Download Current Snapshot' button is present. A light blue box at the bottom of this panel states: 'Includes City, AQI, PM2.5, PM10, Station, Timestamp, WHO multiple, AQI category, region.' The right panel, 'Accumulated Data', contains a paragraph explaining that JanVayu accumulates hourly snapshots in the browser's local storage. It shows '1 snapshots collected' with a time range from '27/5/2026, 4:37:37 am' to '27/5/2026, 4:37:37 am' and 'Cities covered: 33'. At the bottom of this panel are two buttons: 'Download Accumulated Data' and 'Clear Stored Data'. The footer of the interface includes a home icon, the text 'JanVayu २०२४', a search icon, and the text 'Navigate Tools & Action'.

CHAPTER Chapter 8

About, footer, and legal compliance

Provenance, licensing, disclaimers, and the legal architecture beneath every page.

About

Who built JanVayu, who funds it, who maintains it

- Built by a group of independent researchers and civic technologists, not a registered NGO or company.
- Independently funded by contributor effort; no government, corporate, or partisan funding.
- Source code: MIT licensed, public GitHub repository. Content: CC BY-NC-SA 4.0.
- Lead maintainer: Varna Sri Raman (Communications and Insights). Tech contributors credited on the page.

water-spraying – not the combustion sources that drive most PM2.5.

guideline = 5, Indian standard last revised in 2009.

causal dose-response from a domestic 7-district cohort.

About JanVayu

v26.6.19 | Updated 28 May 2026 | In-page Ask JanVayu widget refreshed – v26.6.18 updated the standalone /ask/ PWA but missed the in-page panel at templ-ask-janvayu, which still said "in English or Hindi" and had no example questions. Now matches the PWA: full v26.6.x capability statement, 10 example chips that fill the input on tap, new language dropdown (18 languages selectable), "How it works" rewritten to describe the 4 data fetches + 7 calculators + 6 RTI templates + source-citation requirement.

v26.6.18 | Updated 28 May 2026 | Ask JanVayu onboarding refresh + 5 new Languages. (1) Welcome subtitle rewritten across all languages to surface what the bot actually does: Live AQI · calculators · rankings · trends · apportionment · RTI · multi-source. (2) Suggestion chips: 7 – 10, surfacing the new Phase A-D capabilities (rankings, apportionment, RTI drafting, trend, multi-source reliability, cigarette equivalence, migration). (3) Five new languages added: Telugu, Gujarati, Kannada, Malayalam, Punjabi – total now 18, covering ~95% of Indian mother-tongue speakers. Backend LANG_NAMES extended so Groq language-pinning works for all 18.

v26.6.17 | Updated 28 May 2026 | Two bugs found by Live integration testing of Phases A-D. (1) Ranking responses were stripping city names because rankings.njs returns (key, name, aqi, pm25) but the integration code used c.city (undefined). Fixed: c.name || c.city || c.key. (2) Empty Groq responses returned a useless "No response generated." string. Now the fallback surfaces the actual Live data (AQI, PM2.5, nearest station) + Groq error message + retry hint. Plus the raw Groq response is logged for diagnostics. 8 queries tested end-to-end against the Live endpoint – all returning useful, sourced answers.

v26.6.16 | Updated 28 May 2026 | Ask JanVayu Phase D – multi-source spread + divergence flagging. Closes the calibration loop. Cross-references four sources: WAQI nearest station, WAQI bounds-network (intra-city spread), Sensor.Community community sensors, and a new cached IQAIR_2025_ANNUAL dataset of 37 Indian cities. Computes (a) Intra-city spatial spread, (b) WAQI-vs-community snapshot agreement, (c) today-vs-104hr-baseline anomaly ratio. Flags >2x station range, >50% inter-source disagreement, >1.5x / <0.5x annual deviation. Always-on anomaly note injected even on non-multi-source queries when Live PM2.5 is anomalous. Cumulative across Phases A-D: bot wires 4 tools, runs 7 calculators, knows 10 cities' apportionment, drafts 6 RTI templates, cross-references 4 sources, cites every number.

v26.6.15 | Updated 28 May 2026 | Ask JanVayu Phase C – source apportionment + RTI drafting. New city-level apportionment dataset (10 cities + national fallback) with citations to CEEM 2024 / TERI / IIT-Delhi OSS / CSIR-NEERI / Bose Institute / Jadavpur – bot returns precise source-mix breakdown when asked "where does the pollution come from in [city]". Six RTI templates inLine (station data, NCAP funds, industry compliance, GRAP enforcement, school closure, health burden) each with correct PIO department + address + statutory anchors. Instruction #15 tells the LLM to present templates AS-IS, not paraphrase.

v26.6.14 | Updated 28 May 2026 | Ask JanVayu Phase B – calculators the bot actually runs. Seven deterministic calculators wired in: cigarette equivalence (Berkeley Earth), mortality risk (Krishna et al. 2024), life-expectancy loss (AQI 2025), migration benefit (Live PM2.5 of both cities), transport exposure (WHO/CPCB multipliers), purifier CADR (IHAN formula), school-closure forecast (CAQV GRAP). Each runs deterministically when the question implies it, returns its result with a primary-source citation, and the LLM is instructed to use those numbers verbatim. Input extraction handles transport mode + hours, room sqft, destination city.

v26.6.13 | Updated 28 May 2026 | Ask JanVayu Phase A – tool wiring + methodology calibration. The chatbot now calls three more JanVayu endpoints based on the user's question: rankings.njs for "top 5 worst" / "cleanest" / leaderboard queries; historical-aqi.njs for trend / YoY / "since 2019" queries; community-sensors.njs (Sensor.Community C20) for "near my area" / hyperlocal / community-sensor queries. All three run in parallel via Promise.all with 6 s timeouts. Plus a new METHODOLOGY_REFERENCE prompt block covering the five biggest "why do two sources disagree" cases – CPCB-vs-US-EPA AQI scales, WAQI single station vs CPCB network, CPCB-vs-IQAir annual, Krishna-1.5h vs Lancet-1.72h, low-cost vs regulatory accuracy trade-offs. Phase B/C/D coming next.

v26.6.12 | Updated 28 May 2026 | Ask JanVayu – three bugs fixed from user testing. (1) Station-count queries: new WAQI bounds-endpoint fetch returns a real station list + count for the user's city plus the CPCB national ~533 figure. (2) Sources required: new TOPICAL_REFERENCE prompt block (monitoring network, low-

Footer & legal compliance

Disclaimer, data accuracy, license, IT Act compliance, all four sections present

- Disclaimer: independent, non-partisan, citizen-led platform; for educational and informational purposes; not affiliated with any government or commercial entity.
- Data accuracy: PM2.5 from WAQI / CPCB CAAQMS / third-party networks; health risk estimates are population-level and do not replace medical consultation.
- Licence: code under MIT; content under CC BY-NC-SA 4.0.
- Compliance: published in accordance with the IT Act 2000 and the IT (Intermediary Guidelines and Digital Media Ethics Code) Rules 2021. Contact: contribute@janvayu.in.

- Feed health: `netlify/functions/feed-health.mjs` – daily scheduled check of all 5 feed endpoints, reports healthy/stale/broken.
- Translation sync: `scripts/translations.json` + `check-translations.mjs` – detect stale English terms in translated docs.
- Data-stat system: `scripts/stats.json` as single source of truth for key dashboard numbers (1.72M deaths, \$339.4B cost, etc.). Elements spanned with `data-stat-attributes`. `auto-nstrbad` on `pane-load`.

<p>JanVayu जन्वयु</p> <p>Independent citizen-led air quality monitoring, health impact analysis, and government accountability tracking for India. Clean air is not a privilege, it is a right.</p> <p>Part of AirQuality for Janhit by MMSF Fellows, APC. Data from WAQI, CPCB, WHO, CREA, and UrbanEmissionsInfo.</p>	<p>Navigate</p> <ul style="list-style-type: none"> Dashboard Health Impact Economic Cost Policy Accountability 	<p>Tools & Action</p> <ul style="list-style-type: none"> RTI Templates Citizen Action Resources Downloads Learning Games Walkthrough Ask JanVayu (AI) Blog Docs Full Bibliography (Zotero) ↗ GitHub ↗
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Data: Air quality data sourced from WAQI API, CPCB CAAQMS, and third-party networks. Health risk estimates are population-level and should not replace medical consultation.

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Feeds last updated: 27 May 2026, 04:05 am (auto-updates every 4h)

Home
© 2026 JanVayu | AirQuality for Janhit by MMSF Fellows, APC | #AQForJanHit | Auto-updates: AQI every 10 min | Feeds auto-fetched server-side every 4 hours

C H A P T E R

Chapter 9

Using JanVayu in your work

Concrete ways researchers, journalists, lawyers, and advocates can use the platform in their daily work.

How to use JanVayu in your work

Research

Data Archive → versioned datasets → cite with the version tag.
 Reading List → backing literature.
 Pollution Correlations → exploratory analysis.

[data-archive](#) · [resources](#) · [correlations](#)

Writing

City Scorecards for one-page synthesis. Mission Tracker for evidence-graded claims.
 Accountability Brief for daily wire scan.

[scorecards](#) · [mission-tracker](#) · [accountability-brief](#)

Advocacy

RTI Assistant for the right RTI to the right authority.
 Legal Framework for the constitutional and statutory base.
 Clean Air Wins as counterweight in policy conversations.

[rti-assistant](#) · [legal](#) · [progress](#)

Outreach

Workshops for re-runnable training; Learning Games for school engagement.
 Ask JanVayu for bilingual Q&A; Tools for embeddable widgets.

[workshops](#) · [games](#) · [ask-janvayu](#) · [tools](#)

Personal use

Should I Go Outside; AQI Alerts; Exposure Report.
 Purifier Calculator for household decisions; Migration Calculator for bigger ones.

[go-outside](#) · [aqi-alerts](#) · [exposure-report](#) · [purifier-calc](#) · [migration-calc](#)

Tech stack and data sources

PLATFORM

- Single-page HTML application, no framework lock-in
- Vanilla JavaScript + Chart.js (interactive charts)
- Leaflet.js for the live map
- Typography: DM Sans (UI) · Newsreader (editorial) · JetBrains Mono (data)
- Self-hosted variable WOFF2 fonts
- Open source: MIT licensed code on public GitHub

DATA SOURCES

- WAQI API, live PM2.5 readings across cities
- CPCB CAAQMS, Central Pollution Control Board stations
- PRANA Portal, NCAP city data
- NASA FIRMS, satellite fire-count imagery
- IMD, meteorology (wind, temperature, boundary layer)
- RTI responses, Union Budget docs, scheme utilisation
- Lancet, CREA, CSE, Dalberg, World Bank, IQAir, UrbanEmissions.info

What's next, and how to contribute

Q3 2026

Expand Clean Air Mission Tracker beyond Delhi-NCR (12-week city-by-city roadmap).

Q3 2026

Integrate UrbanEmissions.info resources into the Reading List (7 mapped resources incl. 40 by 2040 calculator).

Q4 2026

Watch the XVI Finance Commission successor framework; NCAP funding cliff dashboard once published.

Ongoing

More multilingual coverage (Marathi, Bengali deepening; Telugu and Kannada on the roadmap).

Ongoing

Workshop kits in vernacular languages for school and RWA outreach.

Contribute · Data, code, or analysis: GitHub PRs welcome · Story leads or RTI tips: contribute@janvayu.in · Workshops in your city: same email

Thank you.

Questions? Things you'd want JanVayu to do that it doesn't yet?

janvayu.in · contribute@janvayu.in · github.com/janvayu