Tackling Delhi Air Pollution

Mains syllabus: GS3 - Conservation, environmental pollution and degradation

Why in the news?

Recently, the Commission for Air Quality Management directed that all end-of-life vehicles (ELV) will not be given fuel in Delhi starting July 1, 2025.

To know about the causes of Delhi's Air Pollution , Click Here.

What are the existing air pollution regulatory mechanisms in Delhi?

- **Commission for Air Quality Management in NCR & Adjoining Areas (CAQM)** - It has been set up for Air Quality Management in *National Capital Region and Adjoining Areas* for better co-ordination and resolution of problems surrounding the air quality index.
- **End-of-Life Vehicle Action** – CAQM has banned the old vehicles with are 10 years for diesel/ 15 years for petrol vehicles.
- **Graded Response Action Plan (GRAP)** – It is a set of emergency measures implemented in the Delhi-NCR region to combat air pollution.
- It is activated based on the daily average Air Quality Index (AQI) in Delhi and involves a series of actions to be taken at different AQI levels.

Stages of GRAP	Action to be Taken
Stage I: Poor (AQI 201-300)	• Public advisories are issued • Dust control measures are intensified, • Restrictions on open burning are enforced, • Orders on overaged diesel/petrol vehicles are enforced.
Stage II: Very Poor (AQI 301-400)	• Actions from Stage I continue. • Restrictions on diesel generator sets are imposed. • Mechanized sweeping and road-dust sprinkling are enhanced. • Targeted actions at pollution hotspots are implemented.
Stage III: Severe (AQI 401-450)	• Actions from Stages I and II continue. • Construction activities are restricted. • Heavy vehicle entry is limited. • Brick kiln operations are suspended. • Restrictions on BS III petrol and BS IV diesel light motor vehicles (LMVs) are imposed.

Stage IV: Severe+ (AQI >450)	• Actions from Stages I, II, and III continue. • Complete halt on construction and demolition activities. • School closures may be considered. • Stricter traffic control measures, potentially including odd-even schemes, are implemented. • Industrial units may face shutdowns

- **BS-VI Compliance** - Starting November 1, 2025, only BS-VI compliant, CNG, or electric commercial vehicles from outside Delhi will be allowed entry.
- **Anti-Pollution Devices -** The use of anti-smog guns, water sprinklers, and dust suppression measures is being enforced.
- **End-of-Life Vehicle Action** - The Delhi government is taking action against old, polluting vehicles (15 years for petrol, 10 years for diesel).
- **Prevention of Stubble Burning –** CAQM has recommended in-situ and ex-situ management of stubble burning in villages in Punjab and Haryana around New Delhi.

Other Measures Taken	
Category	**Key Actions**
Green Initiatives	• 7 million saplings planted under 'Ek Ped Maa Ke Naam'
Waste Management	• Landfills clearing target by 2027-2028 • Expansion of waste-to-energy plants • Promotion of waste segregation
Innovative Solutions	• Cloud seeding pilot programme • 'Startup Innovation Challenge'
Public Engagement	• SMS alerts for vehicle owners; • Community monitoring by 'Environment Doots'

What are the challenges associated?

- **Failure in emission compliance –** the failure to strictly enforce emission compliance on all vehicles on the road, not just the old ones.
- **More responsibility on owners –** Shifting environment responsibility to the vehicle owners considering vehicle age as a sole criterion for pollution, rather focusing on engine, fuel efficacy with policy framework, keeping more burden on vehicle owners.
- **Regulatory gaps -** Inefficient testing frameworks, and poor enforcement of fuel efficiency standards reveals a troubling reality.
- **Incomplete policy framework -** Policy emphasis given on age rather the working efficiency of the vehicles.
- **Problems with vehicle scrapping ecosystem -** most ELVs end up with unauthorized scrap dealers or are resold in states with laxer rules, merely shifting pollution elsewhere.
- **Overlooking circular economy -** The embedded emissions associated with manufacturing new vehicles are ignored, effecting overall emission compliance.

What measures can be taken?

- **Creating robust fuel and emissions control strategy –** Policy may be driven by

emission and fuel compliance rather just the age of the vehicles.

- **Enhancing Infrastructure -** With the planned *installation of ANPR cameras, Delhi can create an automated system* to restrict entry for high-emitting vehicles based on real-time data.
- **Market-based mechanisms -** Considering transferable scrapping credits linked to Aadhaar and vehicle registration, which can reward owners scrapping vehicles with incentives or offset allowances for new purchases or public transport usage.
- **Compliance-based support –** People who are complying with regulations should be encouraged further.

What lies ahead?

- Recently, Delhi government unveiled ambitious ***Air Pollution Mitigation Plan 2025,*** which can bring together technology, stricter rules, and public support to fight pollution.
- The plan's success will depend on how well is carried out and how much nearby states cooperate, and it can be a model for the other major cities in India tackling air-pollution.

Reference

NewIndianexpress | India's tailpipe pollution regime needs urgent reform

