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# Vaniki Capsule

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## GRAP – Graded Response Action Plan

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A statutory, court-mandated framework ensuring coordinated and time-bound action during air pollution episodes.



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16012026



## Graded Response Action Plan (GRAP)

The **Graded Response Action Plan (GRAP)** is a **pre-emptive and emergency framework** designed to **control and reduce air pollution levels** through **graded and escalating response measures**.

It aims to ensure that **timely, coordinated, and proportionate actions** are taken as air pollution worsens, rather than relying on ad-hoc or delayed interventions.

### Origin and Legal Basis:

GRAP was formulated under the directions of the **Supreme Court of India** in the landmark case **M.C. Mehta v. Union of India (2016)**, which emphasised the need for a **structured and anticipatory response** to severe air pollution episodes.

The plan was **officially notified and came into effect in 2017**.

### Implementing Authority:

GRAP is implemented by the **Commission for Air Quality Management (CAQM)**.

### Coordinating agencies include:

- **Ministry of Environment, Forest and Climate Change (MoEFCC)**
- State governments and local authorities

Together, these bodies ensure **monitoring, enforcement, and inter-agency coordination**.

### Key functions of the implementing authority:

- Continuous monitoring of air-quality trends
- Assessment of short-term pollution forecasts
- Activation and withdrawal of GRAP stages
- Issuance of mandatory directions to relevant agencies
- Ensuring inter-agency coordination

### How GRAP Works:

GRAP categorizes pollution-control measures into **four stages**, based on **Air Quality Index (AQI) thresholds**.

As air quality deteriorates, **stricter measures are automatically activated**, reflecting the principle of **graded escalation**.

### Stages of GRAP:

#### Stage I – Poor (AQI 201–300)

- Basic pollution control measures
- Road dust management
- Enforcement of vehicle **PUC (Pollution Under Control)** norms

#### Stage II – Very Poor (AQI 301–400)

- Restrictions on diesel generator sets
- Enhanced monitoring and control in pollution hotspots
- Strengthened enforcement actions

#### Stage III – Severe (AQI 401–450)

- Restrictions on specific categories of vehicles
- Suspension of construction and demolition activities
- Provision for **remote or hybrid schooling** measures

### Stage IV – Severe+ (AQI > 450)

- Ban on entry of heavy vehicles (except essential services)
- Closure of schools (physical mode)
- Shutdown of non-essential industrial activities


### Purpose of GRAP:

- The primary objective of GRAP is to ensure a:
- **Graded** response
- **Coordinated** institutional action
- **Time-bound** pollution-control mechanism


Its goal is to **prevent air quality from worsening to hazardous levels** by activating progressively stricter measures as pollution increases.

### GRAP Stages and AQI Thresholds:

AQI Range	GRAP Stage	Pollution Severity
201–300	Stage I	Poor
301–400	Stage II	Very Poor
401–450	Stage III	Severe
>450	Stage IV	Severe+




### STAGE 1 (AQI 'POOR' - 201 TO 300)




**Stopping all construction and demolition activities with plot size of 500 sqm or more which have not been registered on dust mitigation monitoring portals**

- Mechanised sweeping, water sprinkling on roads
- Enforcing guidelines on use of anti-smog guns at construction site
- Enforcing ban on open burning of waste and PUC

- Discoms to minimise power supply interruptions in NCR
- Encourage offices to start unified commute for employees to reduce traffic




### STAGE 2 (AQI 'VERY POOR' - 301 TO 400)




**Stopping use of diesel generator sets except for essential and emergency services (hospitals, railways, metro, airports, water pumping stations, 'projects of national importance')**


- Not allowing coal/firewood in tandors at hotels
- Enhance parking fees to discourage private transport
- Augment CNG/ electric



bus and metro services by procuring additional fleet and increasing the frequency of service




### STAGE 3 (AQI 'SEVERE' - 401 TO 450)




**Ban on construction and demolition activities except railway, metro, hospitals, sanitation projects etc, linear public projects like highways, roads, flyovers**

- Closure of industries that have PNG supply and are not running on approved fuels. In industrial areas that don't have PNG supply, industries not running on approved fuels will operate only for five days a week
- State governments in NCR may impose restrictions on BS III petrol and BS IV diesel four-wheelers



### STAGE 4 (AQI 'SEVERE +' - MORE THAN 450)



**State govts can consider closing schools; odd-even vehicle system; decide on letting public, pvt offices to work on 50% strength, rest to work from home**

- Stop entry of truck traffic (except essentials, CNG, e-trucks). Ban on plying of Delhi-registered diesel medium- and heavy-goods vehicles, except essentials
- Ban on plying of four-wheeler diesel vehicles, except BS-VI and vehicles for essential services
- Ban C&D activities in linear public projects such as highways, roads, flyovers

*(Actions under Stages II, III and IV will be invoked three days in advance of AQI reaching the projected level)*

### Commission for Air Quality Management (CAQM):

- The **CAQM** is a **statutory body** set up under the **Commission for Air Quality Management in NCR and Adjoining Areas Act, 2021** to coordinate and implement measures for **air pollution control in NCR and adjoining areas (Punjab, Haryana, Rajasthan, and Uttar Pradesh)**.
- The Commission must have a **full-time chairperson with at least 15 years of experience in environmental protection** and pollution control, or 25 years of administrative experience.
- The **Commission is directly accountable to Parliament** and serves as the apex body for NCR air quality management.

### National Air Quality Index :

- Launched by the **MoEFCC** under the **Swachh Bharat Mission**, the **National Air Quality Index (AQI)** provides a simple way for people to understand air quality through the idea of **“One Number – One Colour – One Description.”**
- It tracks **eight pollutants** (PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, SO<sub>2</sub>, CO, O<sub>3</sub>, NH<sub>3</sub>, and Pb) across over **240 cities** under the **National Air Monitoring Programme (NAMP)**.
- The AQI has **six categories**: Good, Satisfactory, Moderately Polluted, Poor, Very Poor, and Severe each linked to likely health impacts.
- By translating complex data into clear terms, AQI helps raise **public awareness**, guide **policy action**, and promote **clean air initiatives** under India’s environmental and health programmes.

### Frequently Asked Questions (FAQs) :

#### 1. What is the Graded Response Action Plan (GRAP)?

GRAP is a graded framework notified in 2017 to tackle rising air pollution in Delhi-NCR through stage-wise actions based on AQI levels.

#### 2. Who implements GRAP in Delhi-NCR?

The Commission for Air Quality Management (CAQM) implements GRAP in coordination with the MoEFCC and state governments.

#### 3. What are the four stages of GRAP?

Stage I – Poor, Stage II – Very Poor, Stage III – Severe, and Stage IV – Severe+, with progressively stricter pollution control measures.

#### 4. What is the National Air Quality Index (AQI)?

The AQI, launched under the Swachh Bharat Mission, uses the concept of **“One Number – One Colour – One Description”** to simplify air quality data for the public.