Graded Response Action Plan (GRAP) – Curb Pollution

Mains: *GS-III – Environment | Pollution*

Why in news?

As air quality in Delhi worsened to the 'poor' category in the national capital, the Commission for Air Quality Management in NCR and adjoining areas (CAQM) announced Stage 1 of the Graded Response Action Plan (GRAP) in Delhi and the NCR to bring down the pollution.

What is GRAP?

- **Background** – Every winter, air pollution spikes in Delhi-NCR and many parts of the larger Indo-Gangetic Plains, mainly due to meteorological factors such as lower wind speeds and a drop in temperature.
- **Sources of pollution** – Pollution from stubble burning in October and November and firecrackers during the festive season adds to emissions from vehicles and dust, further worsening air quality.
- **GRAP** – The Graded Response Action Plan (GRAP) is a *set of short-term emergency measures* to reduce air pollution and is divided into four stages.
- The CAQM announces the different stages, depending on the level of pollution recorded or forecast for the near future.

- **Purpose** – GRAP aims to cut down the sources of pollution for a short time when the air pollution is very high, so that the air quality improves, but it is not a long-term strategy.
- **Implementation** – Whenever the CAQM announces GRAP, it directs State governments to implement the restrictions with "immediate effect" in entire Delhi and also in the NCR districts of Haryana, Uttar Pradesh, and Rajasthan.
- The restrictions will come into effect on the ground when the respective State governments pass orders to implement them.
- **Legal authority** – As per law, the State governments are bound to implement directions of the CAQM and the Commission can initiate legal action against officers not following its directions.

- **Origin** – The GRAP was first notified by the Ministry of Environment, Forest and Climate Change in January 2017, pursuant to Supreme Court directions to provide for graded measures corresponding to different levels of air quality.
- **Role of EPCA** – Initially, the GRAP was implemented by the EPCA (Environmental Pollution (Prevention and Control) Authority), which was formed in 1998 by the Supreme Court and was responsible for the management and coordination of air

pollution in Delhi and the NCR.

- But the EPCA was not backed by a statute, and experts had raised the issue that it lacked the teeth to act against authorities that did not follow its orders.
- **CAQM replaces EPCA** – In 2021, the CAQM replaced the EPCA, and since then it has been implementing the GRAP. Over the years, at times after coming under attack from the Supreme Court, the GRAP has gone through multiple revisions, making it more stringent.

What now?

- **Action focus** – Most of the actions under Stage 1 focus on directing authorities to strictly implement existing norms related to air pollution.
- **4 stages of GRAP**
  - Stage I – 'Poor' Air Quality (Delhi AQI ranging between 201-300),
  - Stage II – 'Very Poor' Air Quality (Delhi AQI ranging between 301-400),
  - Stage III – 'Severe' Air Quality (Delhi AQI ranging between 401-450),
  - Stage IV – 'Severe +' Air Quality (Delhi AQI > 450).
- A higher AQI indicates worsening air quality.
- **Implementation –** Though the GRAP can be imposed any time during the year, the higher stages of GRAP are mostly invoked during winter as air quality deteriorates.
- **Measures under GRAP**

- **Stage I** – The CAQM has directed Delhi and its neighbouring States to ensure that diesel generator sets are not used as a regular source of power supply, among other measures.
- It's under Stage III and Stage IV of the GRAP that more severe actions kick in.
- **Stage III** – The CAQM announces a ban on construction and demolition activities in Delhi-NCR and a ban on the plying of BS III petrol and BS IV or below emission standard diesel Light Motor Vehicles (LMVs) or cars in Delhi and in the High Vehicle Density (HVD) districts of Gurugram, Faridabad, Sonipat, Ghaziabad and Gautam Buddh Nagar.

- **Stage IV** – The ban on construction becomes even more severe with fewer exemptions, and there is a ban on the entry of trucks into Delhi, except for trucks that are BS-VI, electric, CNG, and LNG.
- Other measures are also taken under both stages.

Does GRAP actually help?

- **Findings by CREA** – The recent study by the Centre for Research on Energy and Clean Air (CREA), a Finland-based non-profit research organisation, found that there has been "no consistent" improvement in Delhi's winter air quality over the past four years, despite the imposition of GRAP.
- **Trends in Delhi's winter AQI (Air Quality Index)** – It has fluctuated over the past four years, with no consistent improvement.
- The mean AQI rose from 280 in winter 2022–23 to 304 in 2023–24, fell to 285 in 2024–25 and increased again to 295 in 2025–26.
- The median AQI followed a similar pattern, rising from 294 to 324, falling to 289 and then increasing to 305.
- **Experts' concern** – Despite revisions to GRAP in 2022 and stricter enforcement measures, Delhi's winter air quality has not followed a consistent downward trend and the mean and median AQI for the latest winter were both higher than in 2022–23.

What is different this winter?

- **Delhi's additional measures** – In addition to GRAP, the Delhi government in June this year issued a gazette notification of a set of restrictions for winter months.
- But unlike GRAP, these restrictions will come into play irrespective of the air quality at a particular time.
- **Ban on Older Non-Delhi Vehicles** – As per the June 23 notification, from November 1 to January 31, there will be a ban on the plying of all non-Delhi-registered motor vehicles below BSVI emission standards in the national capital.
- However, electric, CNG, emergency, and sovereign duty vehicles are exempted from it.
- **Higher parking charges** – As per the notification, from November 1 to February 28, existing parking charges at authorised parking sites will be doubled to discourage use of private vehicles, except for parking spaces owned and managed by the Delhi Metro Rail Corporation (DMRC).
- **GRAP overrides State measures** – But if there is any conflict between the GRAP orders and the June 23 notification by the Delhi government, the GRAP will take precedence.
- **Stronger winter pollution response** – With these additional restrictions alongside GRAP, Delhi is expected to witness one of its most extensive anti-pollution regulatory efforts in recent years, at least in terms of policy measures and planned enforcement.

Reference

[The Hindu | Is GRAP enough to curb pollution?]

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