Bharat Stage Emission Standards

Why in news?

Commission for Air Quality Management (CAQM) has lifted the stage III measures of Graded Response Action Plan (GRAP), allowing BS III petrol and BS IV diesel vehicles to run in Delhi and NCR.

What is Graded Response Action Plan?

- It is a step-by-step plan for the ***entire Delhi-NCR region,*** getting on board 13 different agencies of NCR regions like pollution control boards, industrial area authorities, municipal corporations etc.,
- **Objective**- To prevent the deterioration of air quality once it reaches a certain threshold in the Delhi-NCR region.
- **Notified by -** Union Environment Ministry in 2017 based on Supreme Court directions.
- **Implementation-** Commission for Air Quality Management (CAQM).

Air Quality Index (AQI) *is a colour coded index that shows the measure of air quality.*

- **Approach-** The plan does not include yearlong measures and only focuses on incremental actions which gets activated on the basis of values of AQI.
- **Stages-** There are 4 stages which has different set of actions to be taken by authorities.

Stages	Air Quality Index category	Range
Stage I	Poor	201-300
Stage II	Very poor	301-400
Stage III	Severe	401-450
Stage IV	Severe +	>450

- **Recent policy decisions**-
  - Closure of the thermal power plant at Badarpur
  - Bringing BS-VI fuel to Delhi before the deadline set initially
  - Ban on Pet coke as a fuel in Delhi NCR
  - Revoking Stage III action plan under which BS III petrol and BS IV diesel vehicles were restricted

What is Bharat Stage Emission Standards?

- **Objective**- To regulate the output of air pollutants from compression and spark-ignition engines equipment, including motor vehicles.
- They are in line with the European emission norms with a *time lag of **5 years.***
- **Launched by**- *Central Pollution Control Board* (CPCB) under the Ministry of Environment, Forest and Climate Change (MoEFCC).
- **Mandatory provision**- In 1999, Supreme Court mandated that all vehicles in India have to meet the *Euro I or India 2000* standard.

Mashelkar committee *recommended a roadmap for implementation of Euro norms based on emission standards for India.*

About	Europe Emission Standards	Bharat Stage Emission Standards
Origin	In Europe	Indian government-instituted emission norms
Adoption	1970	2000
Iterations	Euro 1, Euro 2, Euro 3, Euro 4, Euro 5, Euro 6	BS I, BS II, BS III, BS IV, BS V, BS VI
Exceptions	All standards are followed with Euro 6 being the latest	The government decided to leap directly from BS-IV to BS-VI, due to the time it took to move from BS-III to BS-IV

What is the difference between BS IV and BS VI?

- **Stringent-** BS VI is more stringent and have lower limits for pollutants especially Particulate Matter (PM) and Nitrogen Oxide (NOx) than BS IV norms.
- **Presence of sulphur-** The BS-VI fuel is estimated to bring around an 80% reduction of sulphur, from 50 parts per million to 10 ppm.
- **NOx emission**- NOx is expected to come down by nearly 70% for diesel cars and 25% for cars with petrol engines.
- **Better emission control**- BS VI has new features such as Selective Catalytic Reduction, Diesel Particulate Filter, Real Driving Emission, and Onboard Diagnostics.
- **Fuel quality**- BS vehicle needs fuel that contains less sulphur hence BS IV grade fuel cannot be used as it may cause damage to the engine and increase emissions.

Quick facts

Commission for Air Quality Management (CAQM)

• **Statutory body**- Enacted under *CAQM in National Capital Region (NCR) and Adjoining Areas, Act 2021*.
• **Mandate-** To enhance coordination, conduct research, identify and address issues related to air quality.
• **Focus areas**- NCR and its neighbouring regions including Punjab, Haryana, Uttar Pradesh, and Rajasthan.
• **Function** - It creates an overarching body to consolidate all monitoring bodies on one platform, for comprehensive and efficient air quality management.

Reference

Indian Express- BS III and BS IV vehicles can run on Delhi

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