HCFI Dr KK Aggarwal Research Fund

Round Table Environment Expert Zoom Meeting on "Implementation Issues and Challenges of the Revised GRAP, Issued by the CAQM to Address Adverse Air Quality during Winter"

October 1, 2023 (Sunday, 12 noon-1 pm)

- The revised Graded Response Action Plan (GRAP) is being implemented from 1st October to control air pollution. It has been issued as a direction by the Commission for Air Quality Management (CAQM) to address adverse air quality during winter.
- The cleanliness week "Swachhata Hi Seva Abhiyan" will also start from 2nd October to mark Gandhi Jayanti, marking the birth anniversary of Mahatma Gandhi.
- Not just the Delhi-NCR region, almost every city in North India is affected, especially in the Indo-Gangetic Plain. Air pollution in this region has been a matter of great concern and requires urgent action to address the issue.
- The first GRAP was issued by Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India on 12th January, 2017 as per direction of the Hon'ble Supreme Court of India and after recommendation of the Central Pollution Control Board (CPCB) of India. The implementation of this GRAP was been assigned to EPCA (Environment Pollution [Prevention & Control] Authority) appointed by the Supreme Court till 2020. It was replaced by the CAQM in 2020. The Commission for Air Quality Management in NCR & Adjoining Areas (CAQM) Act was introduced in 2021. It reviewed the earlier GRAP and on 5th August, 2022, the modified GRAP was notified.
- Based on the experience of last 1 year, the CAQM issued a direction under Section 12 of the CAQM Act 2021 on 27th July, 2023 for implementation of modified GRAP. It was issued to all authorities for strict implementation w.e.f. from 1st October, 2023.
- Implementation is a huge challenge. There are several issues such as low temperature (causing inversion), climate pattern, meteorological conditions, very low wind speed (vertical and horizontal). GRAP has been classified under four stages to address the adverse state of air quality in Delhi: Stage 1 (poor), when AQI (air quality index) is 201-300; Stage 2 (very poor) when AQI is 310-400; Stage 3 (severe) when AQI is 401-450 and Stage IV (severe plus) when AQI is >450.
- Stage 1 Action points: Proper implementation of guidelines on dust mitigation measures in Construction and Demolition (C&D) activities and sound environmental management of C&D waste, regular lifting of municipal solid waste (MSW), C&D waste and hazardous wastes, prohibit dumping of such waste in open land areas, periodic mechanized sweeping and water sprinkling on roads, anti-smog guns in areas >20,000 sq. m, water sprinkling and dust suppression measures in road construction/maintenance/repair projects, prohibition on open burning of biomass and MSW, ensure smooth traffic flow especially in areas with heavy traffic and congestion prone intersections, enforcement of Pollution Under Control (PUC) norms for vehicles and ensure that diesel generator sets are not used as regular source of power supply.
- Stage 2 Action points: Daily mechanical/vacuum sweeping and water sprinkling of the identified roads, use of dust suppressants (at least every alternate day, during non-peak hours) on roads to arrest road dust especially at hotspots, heavy traffic corridors, ensure uninterrupted power supply to discourage use of Generator sets, alert in newspapers/TV/radio to advise people about air pollution levels and Do's and Don'ts for minimizing polluting activities, Resident Welfare Associations (RWAs) should provide electric heaters to security staff to avoid open burning of biomass and MSW.
- Stage 3 Action points: Increase in the frequency of mechanized/vacuum-based sweeping of roads, daily water sprinkling along with dust suppressants before peak traffic hours, on roads (including hotspots, heavy traffic corridors), proper disposal of the collected dust in designated sites/landfills, strict ban on construction and demolition activities (with exceptions as defined), ban on operations of stone crushers, closure of all mining and associated activities, physical classes up to Class V may be discontinued and shift to online classes.
- Stage 4 Action points: Ban on entry of truck traffic (except for trucks carrying essential commodities/providing essential services), ban on plying of Delhi-registered diesel operated goods vehicles, Ban on C&D activities, consider allowing offices to

work on 50% strength and the rest to work from home, additional emergency measures like closure of colleges/educational institutions and closure of non-emergency commercial activities and running of vehicles on odd-even basis.

- A Citizen Charter defining responsibilities of citizens is also spelled out for each stage.
- In Delhi-NCR, the AQI reaches up to 900 or even more during Diwali or in smog like conditions on some days in winter.
- Based on the dynamic model and meteorological forecast by India Meteorological Department (IMD) and Indian Institute of Tropical Meteorology (IITM), on day-to-day basis, actions under stages 2, 3 and 4 shall be invoked, at least 3 days in advance of AQI reaching the projected levels. All the restrictions under the previous stage/s will continue, if the next stage is invoked.
- GRAP is a set of actions expected to be taken by the government and the community as per the severity of air pollution levels starting with post-Kharif harvest time. It is issued every year, but its implementation is very poor. GRAP starts with a particular reading in place. But the impact of poor air quality is felt round the year by citizens, especially in Delhi-NCR.
- PM2.5 and PM10 levels are usually taken into consideration; SOx, NOx, NH3 are not being talked about. So, if the level of SO_2 or NOx increases, the GRAP does not come into effect.
- The analysis of data of last 4 years has shown that the season-wise number of days having mean PM10 concentration in the "good" category is only one day each in the winter seasons of 2016-17 and 2020-21, while on most days it remained "moderate" to "severe". The mean concentration of PM10 reached "emergency" levels in the winter months for 6 and 2 days during 2018-19 and 2020-21, respectively. While the GRAP kicks in only during winter pollution days, the PM10 concentration has reached "severe" or "emergency" levels in the summer, and autumn seasons of all the years, except in 2020-21 when there was a country-wide lockdown.
- We have to realize that environment plays a major role in our health. Air quality is a health issue and not a legal issue. Health, wealth and environment are all interconnected.
- Respiratory diseases such as bronchitis is increasing due to air pollution.
- The entire country, and not just Delhi-NCR, will need such a program in the coming future.
- Delhi has recently introduced hydrogen buses. However, the side effects of using these buses needs to be studied. If successful, this could reduce consumption of fossil fuels such as coal, oil and natural gas.
- Lot of dust is generated during construction and demolition activities. Construction in sites >500 sq. m have to be registered with DPCC (Delhi Pollution Control Committee) or concerned pollution control boards in the state.
- The guidelines for national highways and roads such as Ring Road say that there should be some buffer zone on both sides of the road where no development activity can take place. This buffer land should be developed as a green belt so that the city has a ring road green cover. Trees with huge canopy covers should be planted here.
- Within the city, the medians of the road should be properly covered by grass. But they are usually not covered; hence, the dust keeps on circulating and remains in the air (re-suspended) due to vehicular movement. This dust is polluted as it is contaminated with the toxic emissions from the vehicles.
- Source apportionment needs to be done. There are a large number of incinerators especially in Delhi-NCR. These activities generate lot of dust in the environment.
- The government should focus on the maintenance of roads. Regular cleaning of roads will have an impact on the air quality and thereby on the health of the people.
- A plan is needed, not just GRAP-driven measures, which could be implemented given the readings of the monitors particularly if they are already in the red flag areas.
- The measures should not be implemented just in the winter season, but should be all through the year in a concerted, coordinated manner (inter-ministerial and Urban Local Bodies).
- The rural and urban primary health centers should be involved in the advocacy of how poor air quality impacts the different age groups and those with different health conditions. The immediate local sources of pollution should be identified and this information should be imparted by the auxiliary workers, ASHA workers and the Chief Medical Officer (CMO) of that particular health center.
- Waste is also connected to air quality. Hence, efforts should also be directed towards waste minimization.

- Reuse culture should be promoted, advocated and adopted. The manufacturers should establish a refillable and recyclable delivery system.
- The Food and Beverage (F&B) sector contributes to ≥40% of waste production. This needs to come under regulation.
- Plastic waste can be reutilized for road construction. A study by the Indian Institute of Technology (IIT) Madras in Chennai states that burning of plastic waste is a major contributor of smog in northern parts of India.
- Burning of leaves and wood during winters to keep warm increases pollution.
- The Sewage Treatment Plants (STPs) emit lot of gases (hydrogen sulfide, methane and carbon monoxide). This also needs to be controlled. Deodorization plants should be set up near the STPs to clean the air and release in the environment.
- In many countries in the West, there is either greening on the road sides or small stones are put on the unpaved roads to reduce the dust that is suspended into the air.
- GRAP should be used sincerely and diligently and enforced. It should be categorized according to severity and priority. Intervention is also needed at the policy level. While GRAP considers construction activities in areas ≥500 sq. m, there is no regulatory monitoring and enforcement capacity for areas <500 sq. m. Activity in such areas is very high due to renovation of houses, shops.
- Awareness about air pollution and its adverse impact on health has to be created similar to that for COVID-19.

Participants: Dr Anil Kumar, Mr Vivek Kumar, Mr RS Tyagi, Mr Neeraj Tyagi, Mr Sanjeev Kumar, Mr Rajesh Taneja, Ms Ruchika Sethi Takkar

■■■■

Boosting Health Care Access: 408 More Units in Haryana Embrace Ayushman Bharat

To expand the accessibility of medical treatments for patients from economically weaker groups, the state government has chosen to appoint nearly 400 government health institutions under the Ayushman Bharat initiative. These include birthing huts and primary health care centers (PHCs).

Previously, only civil hospitals and sub-divisional hospitals were impaneled. The program allows persons from economically disadvantaged groups to get medical care and 3 and 15 days' worth of pre- and post-hospitalization costs, respectively.

Each year, Ayushman Bharat, the National Health Protection Program, provides a health insurance benefit of Rs. 5 lakh per household. This program is accessible to individuals earning an annual income of Rs. 1.80 lakh or less.

According to Dr Virender Yadav, Chief Medical Officer of Gurgaon, all 12 PHCs in the city would be accredited under the Ayushman plan. In the facilities, patients can undergo any medical test that was previously inaccessible. Additionally, this will relieve pressure on public hospitals.

At 729 hospitals in Haryana with impaneled status, accessible care is now provided without payment or paperwork. It will now include 408 more health care institutions. The Haryana Health Department made this decision last week during a meeting in Chandigarh.

The Ayushman Bharat scheme in Haryana, launched in 2018, covers around 1,400 treatment procedures and OT expenses for about 1.2 crore people. Recipients are required to furnish evidence of their residency within the state and their Economically Weaker Section (EWS) status through documents such as a Below Poverty Line (BPL) card, Aadhaar card, Parivar Pehchan Patra, or Ayushman Bharat card within 24 hours of admission to the hospital. One of Ayushman Bharat's core principles is providing cooperative federalism and flexibility to states.

The scheme was selected based on the 2011 Economic, Social, and Caste Census, with data verified for 9 lakh beneficiaries.

(*Source: https://timesofindia.indiatimes.com/city/gurgaon/408-more-healthcare-units-in-haryana-to-come-under-ayushman-bharat-scheme/articleshow/104482208.cms*)