

General Studies-3; Topic: Environmental pollution

Delhi Air Pollution

1) Introduction

- Delhi has registered its worst air quality in recent times.
- Delhi Chief Minister Arvind Kejriwal tweeted that the city 'has become a gas chamber'
- If serious steps are not taken, Delhi may soon face an "air pollution disaster" which London saw 65 years ago.

2) Reason for Delhi Air pollution

- With the onset of winter season, meteorological conditions like wind pattern and low temperature aggravates pollution level.
- Combination of smoke from stubble burning in Punjab and Haryana and moisture turned Delhi into a "gas chamber"
- Particulate matter air pollution is worse in winter due to "inversion" where warm air rests above and cooler air temperatures trap smog closer to ground.
- Exhausts from automobiles, industry and thermal power plants
- High level of high-emission vehicles and Delhi has more cars than it can handle.

3) Severity of the problem

- Among megacities Delhi has the worst air quality, according to the WHO report.
- The air quality index (AQI) is in the severe category with the warning that healthy people are also affected.
- The level of the harmful PM2.5 was several times over the standard of 60 micrograms per cubic metre.
- Doctors have termed the situation a "public health emergency"
- Lungs of the elderly and children are less capable of handling such high levels of pollutants and thus they develop breathing difficulty.
- It can also affect the cardio-vascular system and the brain
- When pollution levels rise, the condition of those suffering from Chronic Obstructive Pulmonary Disease (COPD) or asthma worsens
- Despite the ban on crackers this Diwali, the air quality index has deteriorated.
- Indoor and outdoor air pollution made up more than 10% of the total burden of disease in 2016.

4) Concerns / Challenges

- This has a devastating effect on our children's development and health.
- Even those with strong immunity will get affected if the intake of this air is for a prolonged period
- Masks available in the market may not be enough to keep pollutants from getting into lungs.
- The state pollution control board faces institutional, technical, and manpower constraints.
- Delhi has 15 air pollution monitoring stations manned by the CPCB, of which only 10 are functional. In comparison, Beijing has 35 and London 100.
- The value of work time lost due to illness by the patient or the caregiver.
- Even though farmers are aware that the burning of straw is harmful to health, they do not have alternatives for utilising them effectively.
- The WHO says that breathing Delhi air for a day is equal to smoking 20 cigarettes.

- As per estimates, air pollution is costing India around three per cent of the GDP in terms of health costs.

5) **Way Forward**

- Create awareness among the masses by installing LED panels displaying pollution levels
- Preventive measures like hike in parking fees and slashing of metro fares.
- Need for implementing long-term measures as the use of nasal filters or air purifiers can provide short-term relief only.
- Residents must avoid stepping out or doing outdoor activities during the early morning and evening hours.
- Doctors must address school children about air pollution and its hazards.
- CPCB should direct local bodies to check open burning of solid waste and strictly enforce rules related to prevention of emission from construction activities.
- Mechanical sweeping with water wash and vacuum-assisted sweeping of roads to reduce road dust emission.
- There is great potential for making investments in paddy straw-based power plants which can help avoid stubble burning and create employment opportunities.
- The efforts of the MoEFCC, ministry of power, MNRE, MoRTH, MoHUA, MOHFW and a variety of non-governmental partners must come together for dealing with air pollution
- There must be political will for political parties and governments to firstly acknowledge the scale of this health emergency and then work together
- To regulate automobiles -- stringent measures are needed. For example, Singapore has decided to stop registration of all new vehicles.