Environment & Ecology · GS - III

Examine the major causes of severe winter air pollution in the Delhi-NCR region. Suggest an integrated strategy to address this recurring environmental challenge.

EXAM YEAR	PAPER	SUBJECT
DAILY PRACTICE 09/11/2026	GS - III	Environment & Ecology

MARKS	WORD LIMIT
10	~150 words

Answer Hint

Seasonal meteorology, stubble burning, vehicular emissions, firecrackers, industrial pollution, construction dust, PM2.5, temperature inversion, regional coordination, emission control, public transport, crop-residue management.

Model Answer

Introduction

Severe winter air pollution in Delhi-NCR results from the interaction of multiple emission sources and unfavourable meteorological conditions.

Major Causes

- **Agricultural emissions:** Stubble burning in neighbouring states contributes to seasonal particulate pollution.
- **Transport:** Vehicular emissions release particulate matter and nitrogen oxides.
- **Industrial activities:** Factories and thermal power plants contribute pollutants.
- **Urban sources:** Construction dust, waste burning and firecrackers worsen air quality.
- **Weather conditions:** Low wind speed and temperature inversion restrict pollutant dispersion.

Integrated Strategy

1. Promote crop-residue management through incentives, machinery and alternative uses of biomass.
2. Strengthen public transport, electric mobility and vehicle-emission enforcement.
3. Ensure cleaner industrial fuels and strict pollution-control compliance.
4. Control construction dust and prohibit open waste burning.
5. Improve regional coordination, real-time monitoring and graded emergency responses.

Conclusion

Delhi-NCR requires a year-round, airshed-based pollution-control strategy involving governments, industries, farmers and citizens rather than temporary emergency measures alone.

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