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INSTITUTION OF WATER & ENVIRONMENT (INDIA)

committed to safe water & sustainable environment....

IWE News Letter

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WEB SITE :

https://ngodarpan.gov.in

This NGO Darpan portal **enables VOs/NGOs to enrol centrally and thus facilitates creation of a repository of information abot VOs/NGOs, Sector/State wise**. The Portal facilitates VOs/NGOs to obtain a system generated Unique ID, as and when signed.

By registering under Darpan registration, **NGOs will gain access to government schemes, grants, and partnerships, enhancing visibility and credibility**.

दर्पण पोर्टल **वीओ/एनजीओ को केंद्रीय रूप से नामांकन करने में सक्षम बनाता है और इस प्रकार वीओ/एनजीओ के बारे में सेक्टर/राज्यवार जानकारी का भंडार बनाने की सुविधा प्रदान करता है।** पोर्टल वीओ/एनजीओ को हस्ताक्षर करते समय सिस्टम द्वारा जनरेटेड यूनिक आईडी प्राप्त करने की सुविधा प्रदान करता है।

Institution of Water and Environment (INDIA) Registration No.

S-E/ 150 / Distt. South-East/2013

PAN NO.AAAAI7437A



The 2nd Executive Committee Meeting (2025) of the "Institution of Water & Environment (India)" was held on 18th September 2025 at 1230 PM in, Club 27, Sector 27, Noida, U.P. to discuss the agenda.

This was followed by the 28TH GOVERNING COUNCIL MEETTNG in the afternoon session, at the same venue. The Governing Council meeting was attended by members from Uttrakhand State also.The Council decided on holding 7th AGM & 29th Council Meeting on 23rd Nov. 2025, but now it has been rescheduled for 13th Dec, 2025. The text of President's letter follows:

Dear Sir,

It was decided in 28thGoverning Council meeting held on 18th September 2025 in Club 27, Noida that 7th Annual General meeting will be held on 23rd November 2025 and accordingly notice for AGM was issued on 23 rd October 2025. An e-mail from Er. Vijendra Vikramaditya (VP-1) was received on 30th October 2025 for postponement of 7th AGM. After discussion of local Council members present in the last Council meeting the 7th AGM is now being rescheduled for 13th December 2025 (Sunday). Please give your consent on this so that notice for rescheduling 7th AGM can be issued.

Thanks and Regards

A.K. Srivastava

President IWE (I)

Direct Carbon Capture at Negative Cost: The BUNKERMAN Breakthrough

Maj Gen Dr Shri Pal, VSM (Retd)

The rising pollution in big cities, global warming and climate change are the major problems faced by people throughout the world. Despite all possible efforts by governments and other agencies for reducing carbon emissions, the rising graph of carbon dioxide and other greenhouse gases in the atmosphere continues to increase year after year. This is driving global warming and climate change across the globe.

The situation has become so severe now that direct carbon capture from the air seems to be the only practical solution to address this challenge. However, direct carbon capture is currently a costly affair. While scientists around the world are attempting to bring down the cost of carbon capture from its current level of USD 300–600 per metric ton of CO_2 removed, an Indian company called **BUNKERMAN** has developed an indigenous technology that achieves **Direct Carbon Capture at a Negative Cost**.

BUNKERMAN has introduced an **Indoor Air Quality Management System** that absorbs carbon dioxide, volatile organic compounds (VOCs), and other toxic gases from both indoor and outdoor environments using its innovative technology. These pollutants, including particulate matter (PM2.5 & PM10), are trapped within BUNKERMAN filters. After about a year of operation, the saturated filters are replaced, and the used filter material is repurposed to manufacture **Minerals Rich Organic Manure (MROM)**. This organic manure provides additional nutrients to trees and plants, which in turn supply us with food and oxygen. Thus, the entire cycle establishes a **sustainable ecosystem** that helps mitigate global warming and climate change.

The system is especially beneficial in **healthcare environments** such as hospitals, isolation rooms, clean rooms, operation theatres, and patient wards. It is also valuable in emergencies such as **chemical, biological, or COVID-type disasters**, where the system can operate in “Button Up Mode.” In this mode, it not only delivers clean air by absorbing carbon dioxide but also maintains the desired oxygen level and positive pressure within rooms—ideal for patient isolation when required.

Another significant feature of the BUNKERMAN Indoor Air Quality Management System is its ability to integrate with existing air conditioning plants in hospitals or buildings, resulting in **50–60% savings in power consumption** by AC systems.

This pioneering technology has been **inspected, tested, and certified** by reputed government and semi-government agencies in India, including the Defence Research and Development Organisation (DRDO),

This pioneering technology has been **inspected, tested, and certified** by reputed government and semi-government agencies in India, including the Defence Research and Development Organisation (DRDO), Ministry of Defence, Indian Institute of Technology (IIT) Kharagpur, and Indian Oil Corporation Limited (IOCL), Guwahati Refinery. The systems have already been successfully operating for over a year in locations such as Guwahati Refinery, industrial units in Baddi (Himachal Pradesh), Meerut, Delhi, and in residential and office complexes across India.

The **BUNKERMAN innovation** thus offers a unique, cost-effective, and sustainable solution to one of the world's gravest problems—delivering clean air, reducing carbon emissions, and creating a greener future for generations to come.



BUNKERMAN CO2 & VOC Removal System for Homes and Offices



BUNKERMAN Filtration System for Integration with AC Plants

In Data Centres, Hospitals and Other AC Buildings

The Bunkerman can be reached on https:BunkermanIndia.in

Report prepared on Air Pollution of Delhi-NCR, using ***AI***. By-P K Chauhan, DG (F), IWE (INDIA) 👇

Report on "Causes and Suggestions for Pollution Control in Delhi-NCR"

Air pollution in the Delhi National Capital Region (NCR) is a complex public health emergency stemming from a combination of local emissions, regional activities, and adverse meteorological conditions. This report outlines the primary causes and suggests a multi-faceted approach, incorporating artificial intelligence (AI) and existing governmental initiatives, to control pollution levels.

Primary Causes of Pollution:

The recurring "severe" air quality levels, particularly during winter months, are driven by multiple, intertwined factors.

1.Vehicular Emissions: As the largest contributor, motor vehicles account for a significant percentage of PM2.5 and nitrogen oxides (NOx) emissions in Delhi. The high number of registered vehicles, coupled with heavy traffic, exacerbates the problem.

2.Industrial Emissions: Industries and power plants that rely on unapproved or solid fuels emit substantial amounts of sulfur dioxide and particulate matter.

Construction and Road Dust: Rapid urbanization and ongoing construction activities generate immense amounts of dust. Road dust alone can contribute as much as 38% of PM2.5 in the city.

3.Agricultural Stubble Burning: During the post-harvest season (October-November), the burning of crop residue in neighboring states like Punjab and Haryana produces vast plumes of smoke that travel to Delhi-NCR, often contributing up to 45% of the PM2.5 levels during peak periods.

4.Waste Burning and Domestic Fuel Use: Open burning of municipal solid waste and the use of biomass (wood, cow dung) for domestic heating and cooking, particularly in surrounding areas, release harmful particulate matter and gases.

5.Meteorological Factors: During winter, low wind speeds and temperature inversion phenomena (where a layer of cool air traps pollutants near the ground) prevent the dispersion of pollutants, leading to a thick layer of smog.

Suggestions for Pollution Control

Addressing this crisis requires stringent enforcement, regional coordination, and innovative solutions.

1.Policy and Enforcement Measures

Implement and Enforce the Graded Response Action Plan (GRAP): Strictly enforce the emergency measures under GRAP, which include banning non-essential construction, suspending industries not using clean fuels, and restricting older vehicles when air quality reaches "severe" levels.

2.Control Vehicular Movement: Continue the phasing out of old vehicles (e.g., diesel vehicles older than 10 years and petrol vehicles older than 15 years). Promote the use of public transport and support the transition to electric vehicles (EVs) through subsidies.

3.Regulate Industrial Activity: Ensure all industries in the NCR switch to approved, cleaner fuels like natural gas. Monitor emissions through online monitoring systems and enforce the closure of non-compliant units.

4.Manage Construction and Road Dust: Mandate stringent dust control measures at all construction sites, including water sprinkling, use of wind-breaking walls, and mechanized road sweeping to reduce fugitive dust emissions.

Regional and Technological Interventions

1.Address Stubble Burning: Provide farmers in Punjab and Haryana with financial incentives and machinery to manage crop residue without burning (e.g., using bio-decomposers). Coordinated efforts across states are crucial for a lasting solution.

Contd.

2.Enhance Green Cover: Increase urban green spaces and implement large-scale tree-planting drives, as green cover helps in the natural absorption of pollutants.
3.Leverage Artificial Intelligence (AI): Utilize AI for air quality forecasting to predict haze episodes and issue early warnings. AI-based systems can also monitor traffic in real-time to identify and penalize vehicles violating emission norms, reducing corruption.
4.Explore Innovative Solutions: Invest in research and implementation of advanced techniques like "cloud seeding" (artificial rain) during critical periods to wash away pollutants, as trialed by institutions like IIT Kanpur.
5.Public Awareness and Participation
Promote Public Transport and Carpooling: Encourage citizens to use public transportation options, such as the metro and buses, to reduce the number of private vehicles on the road.
Raise Awareness: Conduct ongoing public awareness campaigns about the causes and health risks of pollution, and how individual actions (e.g., avoiding waste burning, getting PUC checks) can help.
6.Utilize Public Grievance Platforms: Encourage residents to report pollution violations (e.g., open burning, construction violations) through designated channels like the Delhi Pollution Control Committee's (DPCC) WhatsApp number or the Green Delhi App.

👆**About the source**

This overview was generated with the help of AI. It's supported by info from across the web and Google's Knowledge Graph, a collection of info about people, places and things. Generative AI is a work in progress and info quality may vary.



NCR SKY – FILLED WITH SMOG

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