Commission for Air Quality Management in NCR and Adjoining Areas
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PRESS RELEASE

- ➤ **CAQM to tap the expertise of reputed technical and scientific institutions to tackle the menace of air pollution in Delhi-NCR**

- ➤ **Seven projects approved by the Commission for financial assistance under the overall supervision of Technical/ Academic institutes of repute**

- ➤ **The approved projects to focus on:**
  - **Use of AI tool for Vehicle Counting;**
  - **Addressing Vehicular Traffic induced road dust re-suspension with Science & Technology (S&T) based Action Plans;**
  - **Autonomous Drone Swarm Framework for real time air quality monitoring;**
  - **DSS for air quality management in Delhi and its Bordering Districts;**
  - **Ambient Air Purification System;**
  - **Under-actuated Filterless Air Cleaner Retrofit for Rolling Stock and Vehicles; and**
  - **Evaluation of Retro-fitment of 2-Wheeler & 3-Wheeler Auto-rickshaws with Electric Drive**

- ➤ **The Projects are aimed at developing better capabilities for air quality monitoring/ demonstrating field implementable solutions/ technologies, for the Commission to bolster its fight against the air pollution menace of NCR**

NEW DELHI:

The Commission for Air Quality Management in NCR and Adjoining Areas (CAQM) has decided to tap the technical/ academic expertise of the reputed scientific institutions working in the field of air pollution for joint and augmented approach towards prevention, control and abatement of the menace of air pollution in Delhi-NCR.

After detailed technical and financial evaluation and appraisal, seven (07) proposals have been approved by the Commission.

These 07 projects in brief are as under:

1. **Use of Artificial Intelligence (AI)/ Machine Learning (ML) tool for vehicle counting by uploading the CCTV footage on Cloud Platform** by CSIR-National Environmental Engineering Research Institute (NEERI), Nagpur

   The project will use Artificial Intelligence (AI)/ Machine Learning (ML) tool for vehicle counting by uploading the CCTV footage on Cloud Platform. This will help in preparing the air pollution emission inventory with the help of vehicle count for urban centers. The different range of traffic density will be used for training of AI Tool for vehicle counting. CCTV Footage of 24 hours of different road section will be uploaded for training the AI Tool.

2. **Addressing Vehicular Traffic Induced Road Dust Re-suspension with Science & Technology (S&T) based Action Plans for Air Quality Improvement in Delhi NCR** by CSIR-NEERI, Delhi and CSIR - Central Road Research Institute (CRRI), Delhi

   The objective of the proposed study is to improve the Air quality of Delhi NCR by addressing vehicular induced road dust with scientific and technological based action plans.

3. **An Autonomous Drone Swarm Framework for Real Time Air Quality Monitoring and Pollutant Quantification in NCR hotspots** by Thapar Institute of Engineering and Technology, Patiala, Punjab

   The objective of the project is to develop an AI based technique for flying drones in a specified trajectory with minimal human intervention for real-time air quality monitoring specifically for the pollutants viz. SO2, NO2, PM 2.5 and PM10. The data will be useful to provide information about exact pollutant concentration, on ground, spatial, temporal, altitudinal and seasonal variation of pollutant concentration at particular area/location in Delhi NCR vis-à-vis prediction of air quality scenario which help in optimization of control strategy.

4. **Decision Support System (DSS) for Air Quality Management in Delhi and its Bordering Districts in the National Capital Region** by IITM, Pune

   The objective of the study is to provide quantification of the local, regional, and distant emission sources' and provide possible emission reduction strategies to avoid forthcoming air pollution events in Delhi and the eight bordering districts, namely Faridabad, Ghaziabad, Gurugram, Gautam Buddha Nagar, Jhajjar, Sonipat, Baghpat, and Rohtak, on a daily basis.

5. **Trial of Ambient Air Purification System (APS) in a Market Place in Delhi NCR** by SASTRA University, Thanjavur

The objective of the project is to carry out trial by deploying the novel Air Purification System (APS) at a market place in Delhi/NCR to reduce harmful exposure to the people and to reduce AQI by at least 25 to 50% in the target area. This is a filter less technology based on Aerodynamics having no Ionization, high voltages or consumable and suitable for hotspots and exposure reduction, capable for distributed deployment with no adverse impact on Urban Aesthetics.

6. **Under-actuated Filterless Air Cleaner Retrofit for Rolling Stock and Vehicles** by IIT Delhi and Swachh.io

   The proposal is about demonstration of Filterless Air Cleaner by retrofitting in buses to use their aerodynamics to clean air using filterless separators (horizontal cyclones). It has low operation cost with provision of standalone solar power for stationary operation.

7. **Evaluation of Retro-fitment of 2-Wheeler & 3-Wheeler Auto-rickshaws with Electric Drive as an option for improvement in air quality in NCR** by Automotive Research Association of India (ARAI), Pune

   The proposal is about prototype development on various mounting on vehicles including system level trials and testing. Two and three wheelers will be retrofitted by mechanical and electrical integration of retrofit kit. Retrofitted vehicles will be deployed for usage and run time data will be collected.

   The successful completion of study will generate evidence based on thorough scientific evaluation of retro fitment of two/three wheelers.

The Projects are aimed at developing better capabilities for air quality monitoring/ demonstrating field implementable solutions/ technologies, for the Commission to bolster its fight against the air pollution menace of NCR. Specific time limits along with budgetary allocations have also been set for each of the projects to be carried out for identification and resolution of problems surrounding the air quality of NCR.

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