

ENVIRONMENT POLLUTION (PREVENTION & CONTROL) AUTHORITY
for the National Capital Region

Dr Bhure Lal
Chairman

EPCA-R/2017/L-21
April 04 2017

To:

The Registrar General
Hon'ble Supreme Court of India
New Delhi

Sub: Submission of Report on Air pollution in the matter of Writ Petition (C) No 13029 of 1985; M.C. Mehta v/s UOI & others

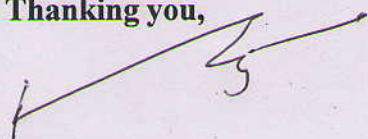
Dear Sir,

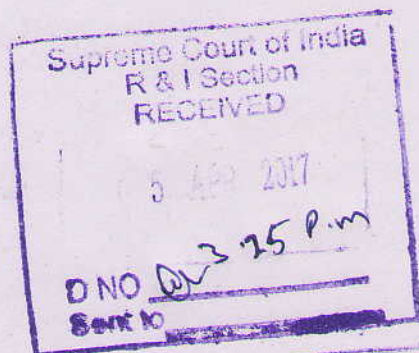
This is with reference to the Hon'ble Supreme Court Order dated February 06, 2017 in W. P. (C) No 13029 of 1985 M. C. Mehta v/s UOI & Others.

I am hereby enclosing the report of the Environment Pollution (Prevention & Control) Authority for the National Capital Region (EPCA), Final Report on Comprehensive Action Plan for air Pollution Control.

Kindly arrange to place the report before the Hon'ble Court.

Thanking you,


(Bhure Lal)
Chairman, EPCA



Central Pollution Control Board

Parivesh Bhawan, East Arjun Nagar, Near Karkardooma Courts, Shahdara, Delhi 110 032
Tel/Fax: 22301955 (CPCB), Tel: 24623060 (R)-Dr. Bhure Lal, Chairman

Report No. 71

Comprehensive Action Plan for air pollution control with the objective to meet ambient air quality standards in the National Capital Territory of Delhi and National Capital Region, including states of Haryana, Rajasthan and Uttar Pradesh

Environment Pollution (Prevention and Control) Authority for the National Capital Region

April 5, 2017

The Hon'ble Supreme Court, in its order dated 06.02.2017, has directed the following to Environment Pollution (Prevention and Control) Authority (EPCA):

“In our opinion, it would be appropriate if all the concerned authorities namely the EPCA, the Government of Delhi as well as the Governments of NCR i.e. Governments of Haryana, Rajasthan and Uttar Pradesh along with CPCB hold a joint meeting within a period of two weeks from today and thereafter come up with one comprehensive plan merging all three plans. We direct accordingly.”

In compliance of the Hon'ble Supreme Court order, EPCA vide its letter no. EPCA-R/2017/L-12 dated March 3, 2017 circulated the Draft Comprehensive Action Plan for air pollution control for comments from the state governments of Delhi, Haryana, Uttar Pradesh and Rajasthan and asked them to examine/ study for modification or addition of new action points in the plan.

Further, in compliance of the Hon'ble Supreme Court order dated March 6, 2017, EPCA vide its letter no. EPCA-R/2017/L-20 dated March 14, 2017 informed the State Governments and CPB about the meeting to be held on March 31, 2017 to finalize the Action Plan.

The EPCA meeting held on March 31, 2017 was attended by the Chairpersons or Member Secretaries of the state pollution control boards of Haryana, Uttar Pradesh, Rajasthan, Delhi; and the Member Secretary and air pollution scientists of CPCB, and other stakeholders.

In preparation of this meeting, the Governments of Haryana and Uttar Pradesh had convened two meetings each and Rajasthan one meeting under their respective Chief Secretary to review the draft plan.

Delhi Pollution Control Committee has informed EPCA that the draft plan was circulated to all concerned departments for inputs. At the meeting of the Committee of Air Pollution Control headed by the Hon'ble Lieutenant Governor, the draft plan was discussed and priority actions were identified for next steps and to ensure action.

This plan has also been seen by the Union Ministry of Road Transport and Highways and the Department of Heavy Industries at the meeting.

Additional comments have been received from the Central Pollution Control Board and SIAM. These have been included in the plan.

At the EPCA meeting held on March 31, 2017, the governments of Haryana, Uttar Pradesh and Rajasthan have mentioned that they endorse the draft plan and have also shared the status of implementation in their respective states.

The state level committees, headed by the Chief Secretaries, will ensure implementation through regular monitoring of the actions listed in this final comprehensive action plan for air pollution control.

It may be noted that the plan has listed a combination of short, medium and long term action for each source of pollution and has indicated agencies responsible for implementation. However, in cases where the actions are longer term, the timeline for implementation have not been detailed out. This is because the State governments are working out the detailed strategies with dates and timeline. The continuous monitoring of this plan to be done by the state level committees under the Chief Secretary will progressively improve time bound implementation.

Final

**Comprehensive Action Plan for air pollution control
with the objective to meet ambient air quality
standards in the National Capital Territory of Delhi and
National Capital Region, including states of Haryana,
Rajasthan and Uttar Pradesh**

April 5, 2017

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1. Combating air pollution in Delhi and the National Capital Region

The Hon'ble Supreme Court, in its order dated 06.02.2017, has directed that:

"In our opinion, it would be appropriate if all the concerned authorities namely the EPCA, the Government of Delhi as well as the Governments of NCR i.e. Governments of Haryana, Rajasthan and Uttar Pradesh along with CPCB hold a joint meeting within a period of two weeks from today and thereafter come up with one comprehensive plan merging all three plans. We direct accordingly."

In view of this, the Environment Pollution (Prevention and Control) Authority (EPCA) has drafted a comprehensive action plan for Delhi and the National Capital Region (NCR) in consultation with the Central Pollution Control Board (CPCB) and the Delhi Pollution Control Committee (DPCC) of the Delhi government. It has been agreed jointly that the Draft Action Plan, as prepared by EPCA, CPCB and DPCC would be sent to state governments of Haryana, Rajasthan and Uttar Pradesh for their review and adoption. This draft is based on the 2012-2013 action plan of the Delhi government, and has been updated based on the orders of the Hon'ble Supreme Court related to air pollution control in Delhi and NCR. It includes the 42 action point directions given by the Central Pollution Control Board in 2015 for Delhi and NCR; the Delhi Decongestion Plan drawn up by the Ministry of Urban Development; the revised Delhi Master Plan of 2021, and other relevant government plans and policies.

The overall objective is to present a pollution source-wise action plan to be implemented in a time-bound manner with adequate stringency, monitoring and compliance system to meet the clean air targets. This comprehensive plan identifies short-term priority action as well as those to be implemented in a medium to longer time frame. The new generation action is more complex in nature, but important for the desired stringency and effectiveness.

1.1. Guiding principles for the comprehensive action plan

Meet clean air standards in a time-bound manner: Air quality monitoring in Delhi and limited air quality monitoring in the NCR show the extent of non-compliance with the air quality standards. According to the 2009 National Ambient Air Quality Standards notified under the Air (Prevention and Control of Pollution) Act, 1981 the daily and hourly standards for pollutants must be met 98 per cent of the time in a year and they should not exceed the standards on two consecutive days. Delhi and NCR will have to strive towards meeting these standards over time. The global practice is to take the average concentration of a pollutant for three years to assess the percentage reduction needed to meet the clean air standards. This shows Delhi will have to reduce PM₁₀ levels by 74 per cent, PM_{2.5} by 70 per cent, and nitrogen dioxide by 37.5 per cent to meet the standards. Similarly, key NCR cities and towns need significant reductions to meet the clean air standards (see *Table 1: Reduction needed in annual average concentration in selected NCR cities to meet the clean air standards*). This must be kept in view to decide on the stringency of action.

Table 1: Reduction needed in annual average concentration in selected NCR cities to meet the clean air standards

City	PM10 levels (in micro-gram per cubic metre cum)	Percentage reduction in PM10 required to meet the annual Average Standard (i.e. 60 micro-gram per cubic metre cum)	NO2 levels (i.e. 60 micro-gram per cubic metre cum)	Percentage reduction in NO2 required to meet the annual Average Standard (i.e. 40 micro-gram per cubic metre cum)	PM2.5 levels (in micro-gram per cubic metre cum)	Percentage reduction in PM2.5 required to meet the annual average standard (i.e. 40 microgramme per cum)
Delhi	232	74%	64	37.5%	132	69.7%
Faridabad	166	63.9%	41	2.5%	NA	NA
Ghaziabad	247	75.7%	35	Within standard	NA	NA
Noida	138	56.5%	31	Within standard	NA	NA
Meerut	149	59.7%	47	14.9%	NA	NA

Note: Annual data for consecutive years for Gurugram is not available NA: Not available;
Table to be updated as data for NCR towns are made available

Source: Based on data reported on CPCB website

Take action on all sources of pollution to meet clean air targets: Given the very high levels of pollution, it is important to take action on all sources to control particulate pollution as well as to prevent the trend in toxic gases from worsening. In 2015, a source inventory and source apportionment study was carried out by the Indian Institute of Technology (IIT), Kanpur under the aegis of the Delhi government. The study assessed 13 key pollution sources and their relative contributions to different pollutants (*see Annex 1: Relative contribution of pollution sources to pollution load in Delhi*). These include dust sources such as road dust and construction dust as well as a large number of combustion sources including vehicles, power plants, industries and waste burning. Such an assessment has not been done in the NCR

Reduce integrated exposure to protect public health: The Union Ministry of Health and Family Welfare in its Report of Steering Committee on Air Pollution and Health-Related Issues in 2015 has stated that it is more important to know how close people are to pollution sources, what are they inhaling, and how much time they spend close to the pollution source than what occurs generally in the ambient air that is influenced by climate and weather. While ambient concentration of pollution helps measure the change in pollution trends over time and space, human exposures are heavily influenced by nearby sources (such as stoves, vehicles and neighbourhood trash burning) and less by general

ambient concentrations. Take action to control pollution from all sources across micro-environments to protect public health.

Public health risk from air pollution is grave and growing: The Global Burden of Disease estimates for 2017 have shown that early deaths related to PM_{2.5} in India are the second highest in the world and ozone-related deaths, though lower than PM_{2.5}, are the highest in the world. Not only the tiny particulates, but also the toxic gases that come entirely from combustion sources pose a very serious health risk. The 2012 epidemiological study on children in Delhi (CPCB and the Chittaranjan National Cancer Institute of Kolkata) covered 11,628 school-going children from 36 schools. It showed that every third child has reduced lung function. Sputum of Delhi's children contains four times more iron-laden macrophages than those from cleaner environs, indicating pulmonary hemorrhage. The Health Effects Study of Boston in 2010 has shown that there are at least 3,000 early deaths in Delhi every year due to air pollution-related diseases that the Hon'ble Supreme Court has reinterpreted to be 8 deaths a day. Several other studies over time have established the serious health impacts and diverse health outcomes of air pollution in this region. This demands urgent and strong action.

Address quantum vs toxicity: Yet another principle that has been established is the setting of priorities according to what is more toxic and dangerous. Recent global studies have authoritatively assessed differentiated health risks according to the source of particulates. A study by the Health Effects Institute, published recently in *Environmental Health Perspectives*, has found that particles from coal and diesel are more harmful than wind-blown dust, as they can lead to an increase in ischemic heart disease-related deaths. Similarly, particles from diesel combustion are very toxic and have been classified by the WHO as a class I carcinogen for strong links with lung cancer, putting them in the same bracket as tobacco smoking and asbestos. This suggests that we must prioritise the more harmful particulates for action. Combustion sources -- vehicles, power plants and industry -- need more stringent and priority action.

Adopt a regional approach for a common air-shed: Local pollution control will have to be supported by regional action. Satellite imagery shows how the entire north Indian belt which is landlocked stays polluted during winter. Landlocked plains trap air and pollution from biomass *chulhas*, industries and power plants, traffic and open fires. The seasonal incidents of farm fires in Punjab and Haryana have brought the matter of trans-boundary movement of pollution to the forefront, catalysing inter-state coordination. The farm fires greatly contribute to pollution in NCR towns during the season (roughly October 25-November 15). This pollution source has been taken up for action by the Hon'ble NGT as well as Hon'ble Delhi High Court and clear directions have been issued to the Punjab and Haryana state governments. This demands a regional action plan to address more dispersed pollution sources. Recognising this, the Hon'ble Supreme Court has provided that all actions to combat pollution must be applicable to the National Capital Region.

Enforce emergency action to control and minimize exposure on a daily basis: In 2016, the Hon'ble Supreme Court intervened to direct the Union government to frame and implement a graded response action plan, which lays out the measures and actions to be taken based on the levels of daily pollution to prevent peaking of pollution. This graded response action plan also, for the first time, provides for actions that need to be taken when pollution reaches a public health emergency level. This plan provides a model for other cities to emulate and should be enforced nationwide (see *Annex 2: Graded Response Action Plan*).

Addressing both consistent and seasonal sources of pollution: The pollution source assessment done by the Indian Institute of Technology, Kanpur in 2015 shows that combustion sources like vehicles, industry and power plants are the most consistent and dominant sources of pollution that emit throughout the year. Most other sources like waste and paddy burning and construction activities are variable and intermittent. Biomass and municipal solid waste burning are important sources, but they are variable. To get the average levels down, strong focus must remain on consistent sources such as vehicles, power plants and industry that also emit toxic gases, which are hazardous to health.

Address secondary particulates that are formed in the air by gases: The IIT Kanpur study of 2015 put the spotlight on the problem of secondary particulates that are formed in the air from gases that come from combustion sources. Nitrate particles formed from nitrogen oxides and sulphate particles formed from sulphur dioxides can be 25 per cent of the PM_{2.5} load in the city. This means the relative contribution of power plants, traffic, industry and open burning to particulate levels becomes even bigger and needs stronger control. The study has also pointed to seasonal variations in the relative contributions to ambient pollution: winter experiences relatively higher contribution from combustion sources. During summer, the contribution of dust is higher.

2. Source-wise clean air action plan and compliance strategy for Delhi and NCR to meet clean air standards

2.1. Air quality monitoring

S. No.	Action points	Agency responsible	Target date from the date of approval
Short-term priority action			
2.1.1	DPCC to set up 20 more real time monitoring stations: The grid plan should be representative of population distribution and land use including residential, commercial, industrial, roadside and sensitive areas. Delhi currently has 28 real time air quality monitoring stations that are operated by Central Pollution Control Board (CPCB), Delhi Pollution Control Committee (DPCC), and Ministry of Earth Sciences (MOES) with continuous relay of information. These include 10 manual stations and 18 real time stations.	Department of Environment (DOE), Delhi Pollution Control Committee (DPCC)	October 2017
2.1.2	NCR-wide air quality monitoring expansion: The SC order of 2.12.2016 has directed CPCB to expand monitoring in the NCR. Accordingly, CPCB has submitted a plan to the Hon'ble Court. This includes – 1. Uttar Pradesh has 10 manual and 1 real time monitoring stations with one each in Ghaziabad and Noida. Real time stations will be set up by March 2017. The UP State Pollution Control Board will set up 6 manual and 8 real time stations. 2. Haryana has 4 real time stations and will set up 13 more real time and 22 manual stations. 3. Rajasthan has 9 manual stations; 2 real time stations are under installation, which will be completed by March 2017. The Hon'ble SC, vide its order dated 06.02.2017, has directed utilization of Rs 2.5 crore from the fund created from Environment Protection Charge on big diesel cars for installing monitoring stations and a Central Control Room for operational control and reporting in Delhi NCR. This is as per the plan submitted by CPCB.	Central Pollution Control Board (CPCB) State pollution control boards in NCR	March-July 2017 (See Annexure 3 for list of monitoring stations in NCR)
2.1.3	Enforce Graded Response Action Plan as directed by the Hon'ble Supreme Court and notified by the Ministry of Environment, Forests and Climate Change (<i>Annexure 2</i>)	EPCA, Task Force under CPCB	Ongoing

Medium to long-term action			
2.1.4	Undertake satellite-based monitoring for tracking and enforcing agriculture waste burning	State governments, CPCB,	
2.1.5	Research studies including air pollution inventory, source apportionment, health impact studies, exposure impacts and other relevant studies: Govt. to support research works / scientific studies by academic / research institutions. Expertise will be sought from various institutions to develop protocols for assessment of the research proposals (<i>CPCB Comment</i>) ¹ .	Environment departments and state boards in NCR	CPCB Committee to appraise and clear studies as needed

¹ Item 2.1.5: "Expertise...research proposals" may be replaced with "Studies using EPC funds may be taken up as per the concept note prepared by CPCB to the Hon'ble Supreme Court"

2.2. Action to reduce vehicular emissions

S. No.	Action points	Agency responsible	Target date from the date of approval
EMISSION AND FUEL QUALITY FOR NEW VEHICLES			
Short-term priority action			
2.2.1	Ensure on-schedule implementation of BS VI fuel and emission standards, including early delivery of BS VI fuel for vehicles to modify technologies. Ensure registration of only BS IV vehicles from April 1, 2017 and only BS VI-compliant vehicles from April 2020 ² Supreme Court order of March 29, 2017 has directed that no vehicle that is not BSIV compliant can be registered from April 1, 2017. Any BSIII vehicle that comes for registration will have to provide the proof of sale before March 31, 2017 ((CPCB Comment) ³ .	State transport departments, Ministry of Road Transport and Highways (MORTH) and Ministry of Petroleum and Natural Gas (MOPNG)	April 1, 2017 and April 1, 2020
2.2.2	Action on dieselization: The SC order dated 12.8.2016 has imposed an environment pollution charge of 1% on registration of diesel vehicles with 2,000 cc and above. A fund has been created from this revenue to fund pollution control efforts. Tax measures are needed to nullify incentives for diesel cars over petrol cars. ⁴	CPCB	Ongoing
2.2.3	Expand CNG programme across NCR: The SC orders dated 16.12.2015, 5.1.2016 and 10.5.2016 have directed CNG stations to be set up across NCR and taxis to convert to CNG ⁵ . NCR to expand CNG bus and auto fleets (see <i>agenda on public transport</i>).	MOPNG, GAIL / IGL	Ongoing
Medium-term action			
2.2.4	Introduce battery-operated vehicles in	DOE &	

² SIAM submission to EPCA: If the date of 1st April 2020 is changed to registration then industry has to stop manufacturing BSIV vehicles by April 2019. But BSVI fuels will come in September 2019. BSVI production can start only from that date.

³ CPCB in its submission to EPCA has stated that the notification regarding the implementation of BS-IV and BS-VI emission norms is applicable for vehicles manufactured on or after given dates, not registration of vehicles. The EPCA notes that the Hon'ble Supreme Court has already directed that it will only be registration of BSIV from April 1, 2017

⁴ SIAM submission to EPCA: Equalise the price of petrol and diesel fuels as diesel cars are already have high tax burden compared to petrol cars. General recommendation is if any product is meeting environmental and emissions standards notified by the Government of India should not be termed as polluter or penalised in any way. If EPCA feels standards are not tight enough, EPCA could recommend tightening of the standards to the GOI. Carry out cost benefit analysis to prioritise different measures for reducing air pollution.

⁵ SIAM submission to EPCA: Need expert view whether CNG should be expanded at the BSVI level as the PM emissions in CNG, petrol, and diesel is same. Marginal increase of 25% in NOx from diesel compared to CNG. CO benefit of diesel is substantial at 50% with added advantage of CO2. In future PM1 could become an issue which would be higher in CNG.

	targeted segments of two-wheelers, three-wheelers and buses. Plan infrastructure for charging and battery disposal. Identify and notify commercial areas in cities with high footfalls and good public transport and goods transport connectivity that can be pedestrianized, supported by zero emission battery-operated vehicles: Priority may be accorded to battery-operated para-transit as feeders and for last mile connectivity in such areas. Ensure organized deployment to reduce congestion. ⁶	DPCC, SPCBs Transport Dept, municipal bodies Discoms	
2.2.5	Install vapour recovery systems in fuel refueling outlets to reduce benzene emissions in NCR. CPCB has issued direction for installation of stage I and Stage II vapor recovery system in all retail outlets with capacity 3000 klm and more in 46 million plus cities by December 2017. In Delhi and NCR all retail outlets should comply with this.	MOPNG, Transport Dept., state boards, DOE	6 months from date of Approval
ON-ROAD VEHICLES			
2.2.6	Auditing of Pollution under Control (PUC) certification centres The SC orders dated 25.11.2016, 2.12.2016, 17.1.2017 and 06.02.2017 have directed the government and EPCA to audit stations in Delhi-NCR and suggest improvements.	State departments of transport in Delhi and NCR	EPCA report on PUC will review the current state and suggest a way ahead
2.2.7	Tighten PUC norms for post-2000 vehicles.⁷ Upgrade in-use emissions testing for diesel vehicles.	Ministry of Road Transport and Highways	
2.2.8	Implement an on-board diagnostic system fitted in new vehicles for vehicle inspection. Improve facilities for its implementation.	Ministry of Road Transport and Highways Department of Transport, NCR	
2.2.9	Link PUC certificates with annual vehicle insurance to ensure 100 per cent compliance.	MORTH, Transport Department,	6 months from date of approval

⁶ SIAM submission to EPCA: We agree with recommendations. There has to be sustained thrust to ensure penetration.

⁷ SIAM submission to EPCA: Indian PUC norms are in line with European regulations and would continue to evolve along EU norms. Analyse existing PUC data after the existing PUC regime is upgraded and data is available. Until the PUC system is made more robust, any further tightening would only result in more malpractices.

		IRDA (Insurance Regulatory and Development Authority)	
2.2.10	Enforcement of law against visibly polluting vehicles: impose penalty, launch extensive awareness drive against polluting vehicles.	Ministry of Road Transport and Highways Department of Transport	3 months
Medium-term action			
2.2.11	Delhi to review and upgrade the Burari commercial vehicle testing centre.	Transport Department, Delhi	Review within 3 months and provide the plan for upgrade
2.2.12	Ensure requisite infrastructure for hydro testing of CNG cylinders in Delhi and NCR. <i>(CPCB Comment)⁸</i>	State transport departments, Ministry of Petroleum and Natural Gas	
TRANSIT TRUCK TRAFFIC			
2.2.13	Divert truck traffic: SC orders dated 9.10.2015, 16.12.2015 and 5.1.2016 directing diversion of non-destined trucks and imposition of ECC on incoming trucks. SC order for installation of RFID system in Delhi: As per the orders dated 9.10.2015, 5.1.2016 and 22.8.2016, the SDMC is tendering for RFID for 13 entry points, which account for 80% of commercial traffic into Delhi. The system will be commissioned before next winter.	Delhi Transport Department and Municipal Corporation of Delhi	Ongoing
2.2.14	Check overloading: The SC order dated 5.1.2016 directing for weigh-in-motion bridges / machines (WIM) at entry points to Delhi. NHAI has commissioned 60 WIM at 6 toll plazas for entry into Delhi. However, implementation of its penalty, which is 10 times of applicable rate for over-loaded vehicles, is lagging.	State transport departments in Delhi and NCR / traffic police and all municipal bodies	Ongoing
Medium to long-term action			
2.2.15	Fast track construction of Western and	EPCA to	Ongoing

⁸ Hydro testing of CNG cylinder maybe omitted as it is related to safety aspect.

	<p>Eastern Peripheral Expressways: Take steps to expedite early completion of the Expressways and submit a completion schedule.</p> <p>SC orders dated 11.2.2005, 11.3.2005, 1.8.2005 and 31.3.2016 on building / upgrading alternative bypass roads. The EPE is on schedule for completion in July 2018 and one stretch of WPE has been commissioned. The EPCA has given a report on existing alternative routes that need upgradation. This is also being pursued with MoRTH and NHAI.</p>	monitor with State and Central governments departments	
2.2.16	<p>Inter-state freight transport plan: Submit plan for inter- and intra-state transport sector for short term, mid-term and long term action points to improve rail-based freight traffic to reduce dependence on trucks.</p>	Transport Department to coordinate with NCRPB and Railway Ministry	6 months from date of Approval
2.2.17	<p>Fuel quality: Prepare an action plan to check fuel adulteration and random monitoring of fuel quality data. The MoPNG has set up a fuel testing laboratory, based on previous SC directions.</p> <p>To review its operations and to ensure that fuel testing is done across NCR for all combustion fuels.</p>	MOPNG	Report on review of working of Fuel Testing Laboratory (FTL) in Noida within 3 months

2.3. Strategies to reduce vehicle numbers on roads

S. No.	Action points	Agency responsible	Target date from the date of approval
PUBLIC TRANSPORT STRATEGIES			
Short-term priority action			
2.3.1	Improvement in bus numbers and services. SC orders dated 27.7.1998 and 5.1.2016 directing Delhi government to abide by SC direction to augment to 10,000 buses by 2000 and the Union to provide land for bus depots.	Delhi Transport Department, DTC, DIMTS, DDA	To provide timeline for implementation
2.3.2	Implement the recommendations of Route Rationalization Report of GNCTD. Improve availability by rationalizing routes and fleet enhancement with requisite modification	Delhi Transport Department, DTC and DIMTS	To provide time for implementation
2.3.3	Reform of DTC and Cluster Bus Operations – modernize fleet and crew scheduling process of DTC, install GPS units on DTC buses and create a traffic control cell for monitoring bus movement, rationalize scheduling of buses under DTC and cluster scheme.	Delhi Transport Department, DTC and DIMTS	Provide timeline
2.3.4	IT system in buses, bus-stops and control centre and passenger information systems for reliability of bus services, and service monitoring.	Delhi Transport Department, DTC and DIMTS	Provide timeline
2.3.5	Bus parking should be made integral to urban planning. Multi- level bus parking to be provided in depots to more efficiently use available land area. Multi-modal, multi-use bus depots to be developed to provide high-class bus services and terminal experience to passengers. Should include well equipped maintenance workshops.	Delhi Transport Department, DTC and DIMTS	Provide timeline
2.3.6	Need bus fare policy to ensure that it is affordable and remains competitive <i>vis-a-vis</i> the operational cost of two- wheelers.	Delhi Transport Department, DTC and DIMTS	
2.3.7	Enforce bus lanes and keep them free from obstruction and encroachment.	Delhi Transport Department, DTC, DIMTS	
2.3.8	Augmenting the service of Metro for carrying more passengers: SC order dated 5.1.2016 directing for augmentation of service / coaches. Metro has submitted to EPCA its plan	DMRC	Ongoing

	for inducting 486 additional coaches by December 2017 for existing lines. Of this, 270 have been procured. In addition, Metro has submitted proposal for 602 coaches, which is being examined by the Delhi govt.		
2.3.9	Three-wheelers Implement electro-mobility for three-wheelers to make them zero emission as efficient feeder system for last mile connectivity and integration with bigger public transport systems. Organise their services for efficient deployment.	State transport departments	
Medium to long-term action			
2.3.10	BRTS / LRTS to be implemented in targeted high frequency routes and complemented with bus services with proper integration of routes, stations and terminals. Explore feasibility of BRT / LRTS connectivity between Delhi and other NCR cities(<i>CPCB Comment</i>) ⁹ .	Delhi Transport Department, DTC and DIMTS	To provide timeline
2.3.11	Fare integration and common ticketing; bring ETVMs into all DTC buses. Common mobility cards to be the mandatory access card for buses.	Delhi Transport Department, DTC and DIMTS	To provide timeline
2.3.12	Implementation of multi-modal integration plan for bus-Metro IPT-NMT at key / all interchange points.	Delhi Transport Department, DTC and DIMTS	To provide timeline
2.3.13	Demarcation and development of Influence Zones around Metro stations as per MPD-2021 to improve access to the public transport system.	Transport Department, PWD, DDA /UTTIPEC, DMRC, DTC, DIMTS	To provide timeline
2.3.14	Proper regulations and organization including providing driver-training, certification, etc. for cab and auto-rickshaw drivers	DDA, MCD, PWD	To provide timeline
2.3.15	NCR connectivity for public transport – need bus and Metro plans. Rationalize routes and augment public transport in NCR on CNG mode.	Ministry of Urban Development, NCR Planning Board, state governments	To provide timeline
2.3.16	Rationalize entry taxes in NCR under the NCR reciprocal agreement to lower costs of travel by public transport.	Ministry of Urban Development, NCR Planning Board, state	To provide timeline

⁹ BRTS/LRTS in high frequency routes may be reconsidered.

		governments	
2.3.17	Integrate ITS in bus systems in cities in NCR (automated vehicle location, passenger information system, fare collection system).	Ministry of Urban Development, NCR Planning Board, state governments	To provide timeline
2.3.18	Regional Rapid Transit System (RRTS) integrated with local transit systems should be implemented to provide seamless connectivity between regional and sub-regional centres of NCR.	Ministry of Railways and state governments	To provide timeline
2.3.19	Integrated passenger terminals to be created with mixed use and multi-modal facilities for passenger comfort, integrating regional and local public transit systems.	Ministry of Railways and state governments	To provide timeline
2.3.20	Implement traffic impact assessment of infrastructure project for planning and management.	Ministry of Urban Development, Municipal govts, planning departments of cities, DDA in Delhi	To provide timeline

2.4. Non-motorized transport (NMT) network

S. No.	Action points	Agency responsible	Timeline from date of approval
Short-term priority action			
2.4.1	<p>Prepare and implement zonal plans for developing an NMT network. This should include the following action points with appropriate timelines for implementation:</p> <ul style="list-style-type: none"> Implement network plan for footpaths on all roads, as per the IRC codes and Street Design Guidelines. Target specific kilometers of footpaths and cycle tracks to be completed in a phased manner and cover the entire city. Identify roads where dedicated and wide footpaths and cycle tracks (two-way) can be created on either side of the street, as per Street Design Guidelines. Implement a network plan for more secondary street networks and ungated streets to provide direct shortest routes for pedestrians and cyclists. Vehicular traffic can also be redistributed from major junctions through multiple routes to decongest. Signal-free corridors should be avoided as more road-space only attracts more traffic and impedes people's movement. 	PWD, MCD, NDMC, DDA, Traffic Police, UTTIPEC	Provide plan in 3 months
	<ul style="list-style-type: none"> Plan and upgrade pedestrian / NMT crossings at least every 250 m, with pedestrian signals and signages. These should preferably be at-grade. Reduce block sizes to reduce walking and cycling distances. Synchronization of signals should be implemented on a priority basis with an integrated IT-based traffic management system so that in spite of having frequent at-grade pedestrian crossings, traffic can move swiftly across signals. Cycle sharing systems being introduced as feeders to public transport to be expanded to cover entire Delhi. Identify and notify key commercial areas with high footfalls and good public transport connectivity to create pedestrian plazas. Make safety and walkability audits of walking and cycling infrastructure mandatory. Encroachment of NMT lanes to be made punishable offence under the current provision of law. 		

2.5. Parking policy to reduce congestion and pollution

S. No.	Action points	Agency responsible	Timeline from date of approval
2.5.1	Parking policy and enforcement measures to be prepared and finalized for implementation in Delhi and NCR. To include – i) Enforcement strategies ii) Parking pricing policy and iii) Parking management strategies. Delhi Master Plan 2021 has provided for a Parking District Management Plan.	Delhi: DOE, UTTIPEC, all municipal agencies, traffic police, transport dept. NCR: All state governments, transport departments urban development departments	Provide timeline for implementation in 3 months
ENFORCEMENT AND MANAGEMENT			
Short-term priority action			
2.5.2	<ul style="list-style-type: none"> Physically demarcate legal parking areas. Equip them with metering systems, proper signages, IT for information on parking availability to reduce cruising time and on-street management. Existing / planned public parking facilities and on-street and off-street parking (including multi-level) facilities should be bundled for management by a single agency/ operator. New stand-alone parking only sites are mostly not required since parking is permitted in all use zones. Parking facilities within developments (e.g. commercial/ residential/ institutional) should be shared and priced for enabling use by different types of users during different times of the day, thus bringing down total parking space demand. Plan and implement parking provision for buses, commercial vehicles and IPT-NMT modes, and for the differently-abled. 	Municipal corporations in Delhi and NCR Urban development department	
PARKING PRICING AND PENALTY			
Short-term priority action			
2.5.3	<ul style="list-style-type: none"> Introduce and further upgrade variable time-based pricing, as per market demand. 		

	<p>Coordinated off-street and on-street / surface pricing in commercial and residential areas, and parking permits in residential areas. Parking should be charged as per duration, location in city and size of the vehicle.</p> <ul style="list-style-type: none">• Take steps to prevent parking of vehicles in the non-designated areas. Penalties related to parking should be charged 10 times the parking fee along with impounding of vehicles after a certain level of violation.• Strict penalty for violation of parking regulations and walkway encroachment. Parking on footpaths should be made a cognizable offence under the Delhi Municipal Corporation Act and Police Act.• Reform parking lease agreements to increase parking revenue for local area development and public transport improvement.		
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2.6. Traffic management

S. No.	Action points	Agency responsible	Timeline from date of approval
2.6.1	<ul style="list-style-type: none"> Introduce early alarm system during traffic congestion for the benefit of commuters on major routes, to facilitate route diversion. 	PWD, MCD, NDMC, DDA, Traffic Police, UTTIPEC	To provide timeline
2.6.2	<ul style="list-style-type: none"> Consider introducing plan for flexi / staggered timings to minimize peak movement of vehicles on roads. 		
2.6.3	<ul style="list-style-type: none"> Synchronize traffic movements / introduce intelligent traffic systems for lane-driving. 		
2.6.4	<ul style="list-style-type: none"> Formulate action plan for controlling decongestion of fuel stations including increasing the number of dispensing machines. 		
2.6.5	<ul style="list-style-type: none"> Electronic monitoring of traffic violations. 		
2.6.6	<ul style="list-style-type: none"> Examine existing framework for removing broken down buses / trucks from roads and create a system for speedy removal and ensuring minimal disruption to traffic from such buses / trucks. 		
2.6.7	<ul style="list-style-type: none"> Conduct audit of traffic intersections and install functional traffic signals at all major intersections in all NCR cities. 		
2.6.8	<ul style="list-style-type: none"> Conduct review of traffic signaling system at all intersections in Delhi / Noida and Gurugram and other NCR towns that are traffic hotspots and bring requisite changes to reflect the traffic movement pattern at intersections. 		
2.6.9	<ul style="list-style-type: none"> Enforce lane driving through heavy fining as in Mumbai. 		

2.7. Power plants and industries

S. No.	Action points	Agency responsible	Timeline from date of approval
Short-term priority action			
2.7.1	Permanent closure of Badarpur Power Plant after commissioning of the Tughlakabad sub-station or move towards cleaner natural gas	NTPC and Power-grid corporation	June 2018 for commissioning of Tughlakabad sub-station and permanent closure of Badarpur post this by mid-2018.
2.7.2	Closure of Badarpur during peak winter months when Graded Response Action Plan is in force	NTPC/DPCC	October 15 2017-March 15, 2018
2.7.3	Monitoring of flyash pond at Badarpur, particularly during summer months to control fugitive dust	DPCC	May-September 2017 and May-September 2018
2.7.4	Plan for site restoration of over 600 ha fly ash pond of Badarpur	NTPC	Immediate
2.7.5	Time-bound action based on plan for restoration of fly ash pond land area	NTPC	Aim to coincide restoration by time of permanent closure of coal plant
2.7.6	Move to full utilization of the cleaner natural gas-based Bawana station for power supply to Delhi	Department of Power, Delhi with GAIL	Immediate
Medium to long-term action			
2.7.7	Progressively close the older and more polluting thermal power plants in NCR and to move to cleaner natural gas. Change the merit order dispatch policy of the Union government so as to incentivize cleaner plants to operate in the region.	Ministry of Power and state governments	To provide timeline
INDUSTRIES			
Short-term priority action			
2.7.8	Urgent ban on furnace oil, pet coke, which are dirty industrial fuels with high Sulphur and heavy metals:	MoEF&CC and state governments	Immediate
2.7.9	Strict enforcement against illegal use of such fuels, including fuels which do not have specifications laid down or are included in the	DPCC and state pollution control boards	Immediate

	acceptable fuels as mandated by state pollution control boards		
2.7.10	Strict enforcement of air pollution control measures in all industries, includes those located in unauthorized areas.	DPCC and all state pollution boards	Immediate
2.7.11	Stop unrestricted import of such fuels, which are high in pollution because of high Sulphur or toxins	Ministry of Commerce	Immediate
2.7.12	Ensure that the sale, transportation and distribution of such fuels follows CMVR strictly for hazardous goods and ensure that there is no sale in restricted regions	Oil marketing companies	Immediate
2.7.13	Ensure calibration and working of Continuous Emission Monitoring System (CEMS) in all industries in NCR and provide information to monitoring agencies to begin and work out how this information can be provided to public as this will ensure that the system is operational	CPCB, DPCC and all state boards	
BRICK-KILNS			
2.7.14	Convert all brick kilns to zigzag technology – from natural draft kilns to induced--draft kilns (zigzag technology).	MOEFCC and state pollution control boards	
INCINERATORS			
Medium to long-term action			
2.7.15	Implement emission norms for incinerators and examine the feasibility of less polluting alternatives.	Department of Environment, CPCB, DPCC, SPCBs	
2.7.16	Implement CEMS for incinerators and provide data on emissions on an open platform progressively.		
2.7.17	Develop a siting policy for biomedical incinerators.		
WASTE-TO-ENERGY PLANTS			
2.7.18	Strict implementation of emission norms, use state of the art technology and provide emission data to State Pollution Control Boards.	State Pollution Control Boards	
2.7.19	Develop a siting policy.	MOEFCC, CPCB, State Pollution Control Boards	

2.8. Generator sets

S. No.	Action points	Agency responsible	Timeline from date of approval
Short-term priority action			
2.8.1	Ensure that only those DG sets that meet the standards are allowed to operate.	CPCB, DPCC, SPCBs and Department of Environment	
2.8.2	Operating time of DG sets should be regulated according to graded action plan.	CPCB, DPCC, SPCBs and Department of Environment	
2.8.3	Only approved fuel should be allowed.	CPCB, DPCC, SPCBs and Department of Environment	
2.8.4	Non-usage of DG sets in social events as per graded action plan.	CPCB, DPCC, SPCBs and Department of Environment	
Medium to long-term action			
2.8.5	Alternate power systems should be promoted in cell towers, and use of DG sets discouraged.		

2.9. Open burning (including solid waste and agricultural residues)

S. No.	Action points	Agency responsible	Timeline from date of approval
Short-term priority action			
2.9.1	SC order dated 16.12.2015 has directed a complete ban on garbage burning in the entire NCR region. This is being monitored by Delhi and NCR state governments. Take stringent action against open burning of biomass / leaves / tyres etc to control such activities	Department of Environment, SPCBs DPCC, municipal bodies, DPGS	
2.9.2	Ensure proper collection of horticulture waste (biomass) and composting-cum-gardening approach; municipal zonal offices should be responsible for controlling burning of leaves and garbage on roads / parks. All horticulture agencies should have compost pits in parks.	Municipal bodies and other park owning bodies like DDA in Delhi	
2.9.3	Implement the Hawa Badlo app -- reporting of garbage / municipal solid waste burning through mobile-based applications and other social media platforms linked with Central and state-level control rooms for accountability. Build an awareness campaign through RWAs, Eco Clubs and municipal authorities.		
REGIONAL PROBLEM AND BIOMASS BURNING			
2.9.4	Ensure strict enforcement of ban on burning of agriculture waste and crop residues in Punjab and Haryana.	State governments in NCR and Punjab	Ongoing
2.9.5	To increase subsidy for purchase of equipment that eliminates the need for burning stubble and straw.	State governments in NCR and Punjab	Ongoing
2.9.6	Enforce the series of directives from the Hon'ble Supreme Court and NGT on ban on agricultural burning and recycling and reuse of this waste.	State governments in NCR and Punjab	Ongoing
EPISODIC EVENTS			
2.9.7	Fire crackers -- SC order of November 25, 2016 has banned fire crackers in Delhi and NCR. Monitor its implementation and enforcement.	Department of Environment, SPCBs DPCC, DCP	Immediate

2.10. Domestic chulha burning and open eateries

S. No.	Action points	Agency responsible	Timeline from date of approval
Medium to long-term action			
2.10.1	In slums and low-income neighbourhoods, as well as roadside eateries/dhabas/ restaurants etc promote and give access to LPG and electricity. Link commercial license to clean fuels.	Department of Environment, MoPNG	To give timeline
2.10.2	Prohibit use of coal in hotels and restaurants, eliminate use of kerosene for cooking in NCR and incentivize move to LPG.	MoPNG and state governments	
2.10.3	A targeted programme can be developed with the Union Ministry of Petroleum and Natural Gas for wider distribution of LPG.	MoPNG and state governments	

2.11. Control measures for road dust

S. No.	Action points	Agency responsible	Timeline from date of approval
Medium to long-term action			
2.11.1	<p>SC direction dated December 16, 2016 has directed repair and building of pavements and vacuum cleaning of roads. This needs to be expedited and implemented across NCR. Based on this, the following may be carried out:</p> <ul style="list-style-type: none"> •Implement street design guidelines for footpaths and cycle tracks with adequate vegetative buffers and paving of roads. Take steps for blacktopping / pavement of road shoulders to avoid road dust. •Phase-in mechanical / vacuum-based street sweeping wherever feasible; introduce wet / mechanized vacuum sweeping of roads. •Implement truck loading guidelines; use of appropriate enclosures for haul trucks; gravel paving for all haul routes. •Sprinkling of recycled water (without compromising other uses); introduce water fountains at major traffic intersections, wherever feasible. •Maintain pot hole-free roads for free flow of traffic to reduce emissions and dust. •Increase green cover in Delhi. Undertake greening of open areas, gardens, community places, schools and housing societies. 	Department of Environment, municipal bodies, DDA, PWD, CPWD, DSIIDC, DTTDC Road-owning agencies, Police Dept. Forest Dept.	Ongoing Provide timeline for full implementation
2.11.2	<ul style="list-style-type: none"> •Enforcement of air pollution control in concrete batching (use of water spray and wind breakers, bag filter at silos and enclosures, hoods, curtains etc) 		

2.12. Control measures for construction dust

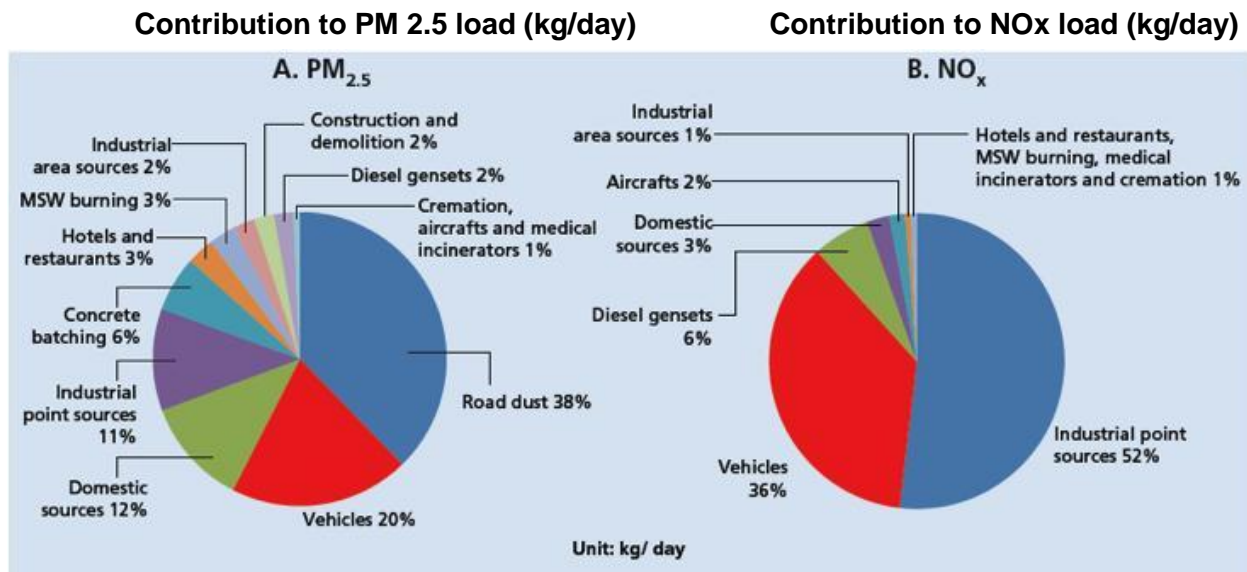
S. No.	Action points	Agency responsible	Timeline from date of approval
Short-term priority action			
2.12.1	SC order dated 16.12.2015 directed the Delhi govt to ensure measures are taken to mitigate dust pollution from construction. The EPCA has given a concise check list for inspection of construction sites. This should be implemented. Undertake control measures for fugitive emissions from material handling, conveying and screening operations through water sprinkling, curtains, barriers and dust suppression units. Penalties have also been enhanced. Needs enforcement.	Municipal bodies, PWD, CPWD, DSIIDC, DTTDC, road owning agencies	Ongoing
Medium-term action			
2.12.2	For material handling and construction demolition, it should be obligatory on part of the developers to provide evidence of debris disposal at designated sites. Promote recycling of construction material. Implement provision of Central regulations for construction and demolition waste	Municipal bodies, PWD, CPWD, DSIIDC, DTTDC, road owning agencies	

3. Institutional arrangement for implementation

The following institutional arrangement is proposed for implementation of the Comprehensive Action Plan. The aim is not to create new institutions but to make the current institutional arrangements mandated by the Hon'ble Supreme Court for implementation of the Graded Response Action Plan and by the Hon'ble National Green Tribunal for air pollution control in the region responsible for implementation of the action plan. The institutions are as follows:

- Central-level Committee under the Secretary, Ministry of Environment, Forests and Climate Change to oversee implementation at the NCR level
- State-level committees under the Chief Secretary to oversee implementation at the state level
- CPCB-Task Force to monitor air quality and to inform Central, state committees and the EPCA about the need for implementation of measures under the Graded Response Action Plan (*CPCB Comment*)¹⁰.
- Directions under the Graded Response Action Plan; monitoring of key milestones in comprehensive action plan and preparation of special reports on key to guide action by EPCA. Regular compliance reports to the Hon'ble Supreme Court.

¹⁰ As per the Graded Response Action Plan, the role of CPCB Task Force is to suggest additional measures in case of emergency or severe plus categories.

Annexure 1: Relative contribution of pollution sources to pollution load in Delhi

Source: IIT Kanpur study, 2015

Annexure 2: Graded Response Action Plan according to pollution levels in Delhi and NCR to inform public action and to take effective steps to combat public health emergencies

Table: Graded Response Action Plan for reducing air pollution

The graded measures according to AQI are listed from public health emergency level to downward. The measures are cumulative. Emergency and Severe levels include cumulatively all other measures listed in the lower levels of AQI including Very Poor, Poor and Moderate. It is also clear that the actions listed in the poor category need to be implemented though out the year. But during months when weather conditions turn more adverse there is need for greater scrutiny on enforcement.

Severe + or Emergency	Agency responsible/Implementing Agency
When PM_{2.5} levels cross 300 µg/m³ or PM₁₀ levels cross 500 µg/m³ (5 times above the standard) and persist for 48 hours or more	
Stop entry of truck traffic into Delhi (except essential commodities)	Municipal Corporations and Traffic Police of Delhi and NCR Towns
Stop construction activities	Delhi Pollution Control Committee/Municipal Corporations of Delhi and NCR towns
Introduce odd and even scheme for private vehicles based on license plate numbers and minimize exemptions	Secretary cum Commissioner of Transport Department, NCT of Delhi, and Transport Commissioners of NCR towns
Task Force to take decision on any additional steps including shutting of schools	
Severe	
When PM_{2.5} levels are above 250 µg/m³ or	
PM₁₀ levels are above 430 µg/m³	
Close brick kilns, Hot Mix plants, Stone Crushers	Chairpersons Delhi Pollution Control Committee, State Pollution Control Boards of Haryana, Rajasthan, and Uttar Pradesh
	Superintendent of Police and Deputy Commissioner of respective districts
Shut down Badarpur power plant and maximize generation of power from existing natural gas based plants to reduce operation of coal based power plants in the NCR.	Chairpersons Delhi Pollution Control Committee, State Pollution Control Boards of Haryana, Rajasthan, and Uttar Pradesh
Intensify public transport services. Introduce differential rates to encourage off-peak travel.	Secretary cum Commissioner of Transport Department, NCT of Delhi, and Transport Commissioners of NCR towns
	Chairperson, Delhi Metro Rail Corporation (DMRC)

	Chairpersons, State Transport Corporations
Increase frequency of mechanized cleaning of road and sprinkling of water on roads. Identify road stretches with high dust generation.	All road owning agencies including Municipal Corporations of NCT of Delhi and NCR towns, Public Works Departments and National Highway Authority of India
Very Poor	
When PM_{2.5} levels are between 121-250 µg/m³ or	
PM₁₀ levels are between 351-430 µg/m³	
Stop use of diesel generator sets	Chairpersons Delhi Pollution Control Committee, State Pollution Control Boards of Haryana, Rajasthan, Uttar Pradesh
Enhance parking fee by 3-4 times	Municipal Commissioner
	Municipal Corporations of NCT of Delhi and NCR towns
Increase bus and metro services by augmenting contract buses and increasing frequency of service	Principal Secretary, Department of Transport of NCT of Delhi
	Delhi Transport Corporation (DTC)
	Delhi Integrated Multi-modal Transit System Ltd (DIMTS)
	Delhi Metro Rail Corporation (DMRC)
	State Transport Corporations in NCR towns
Stop use of coal/firewood in hotels and open eateries	Municipal Corporations of NCT of Delhi and NCR towns
Residential Welfare Associations and individual house owners to provide electric heaters during winter to security staff to avoid open burning by them	Resident Welfare Associations
Alert in newspapers/TV/radio to advise people with respiratory and cardiac patients to avoid polluted areas and restrict outdoor movement.	Chairpersons, Delhi Pollution Control Committee, State Pollution Control Boards of Haryana, Rajasthan, and Uttar Pradesh
Moderate to poor	
Poor – When PM_{2.5} levels are between 91-120 µg/m³ or	
PM₁₀ levels are between 251-350 µg/m³	
Moderate – When PM_{2.5} is between 61-90 µg/m³ or	
PM₁₀ is between 101-250 µg/m³	
Stringently enforce/stop garbage burning in landfills and other places and impose heavy fines on person responsible	Municipal Commissioner
	Municipal corporations of Delhi and NCR towns

Close/stringently enforce all pollution control regulations in brick kilns and industries	Chairpersons, Delhi Pollution Control Committee, State Pollution Control Boards of Haryana, Rajasthan, and Uttar Pradesh
Stringently enforce pollution control in thermal power plants through PCB monitoring	Plant in-charge of power plants in NCR, and Delhi Pollution Control Committee and State Pollution Control Boards of Haryana, Rajasthan and Uttar Pradesh
Do periodic mechanized sweeping on roads with heavy traffic and water sprinkling also on unpaved roads every two days	Municipal Commissioner, Municipal Corporations of NCT of Delhi and NCR towns
	Commissioners, Traffic Police of Delhi and NCR towns to identify roads with heavy traffic and provide information to respective Municipal Commissioners
	Chief Engineers of officers in charge of CPWD, PWD of Delhi and NCR towns to identify unpaved roads with heavy traffic and provide information to respective Municipal Commissioners
Strict vigilance and no tolerance for visible emissions – stop plying of visibly polluting vehicles by impounding or heavy fine.	Commissioner or Officer in Charge, Transport Department and Traffic Police of NCT Delhi and NCR towns
Strict vigilance and enforcement of PUC norms	
Stringently enforce rules for dust control in construction activities and close non-compliant sites	Commissioner or Officers in charge of Police Departments of Delhi and NCR towns
Deploy traffic police for smooth traffic flow at identified vulnerable areas	Commissioners Traffic Police of Delhi and NCR Towns
Strictly enforce Supreme Court order on diversion of non-destined truck traffic and ensure only trucks registered after 2005 are allowed entry into Delhi	Municipal Corporations of NCT of Delhi and NCR towns
	Traffic Police of NCT of Delhi and NCR towns
Strictly enforce Supreme Court ban on firecrackers	Chief Controller of Explosives
	Petroleum and Explosive Safety Organizations (PESO)
	Commissioner of Officer in charge of licensing in the police departments of Delhi and NCR
Ensure fly ash ponds* are watered every alternate day during summer months (March – May).	Plant in charge of Power Plants in Delhi and NCR towns

Information dissemination Social media, mobile Apps should be used to inform people about the pollution levels, contact details of control room, enable them to report polluting activities/sources to the concerned authorities, and actions that will be taken by government based on the level of pollution.	Chairpersons, Delhi Pollution Control Committee, State Pollution Control Boards of Haryana, Rajasthan, and Uttar Pradesh
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Note: * IIT Kanpur Report finds high fly ash in air during summer months. Therefore, action is necessary during this period. But long term action has to be removal of this source of pollution from Delhi and its vicinity through the reuse and removal of all fly ash dumps.

Action to be taken by public

While the CPCB headed Task Force will use the AQI and health advisory to inform people about the dangers of exposure, people are also expected to take precautionary measures to protect themselves. Suggested actions by public are listed below:

Level according to Air quality index	Action
Very poor, severe and emergency	<p>Those suffering from heart diseases, asthma, and other respiratory disease may consider avoiding undue and prolonged exposure.</p> <p>Schools to suspend all outdoor activities and sport events during Severe and Very.</p> <p>Poor conditions</p> <p>Report visible emissions from vehicles, industries, power plants, garbage burning, and other non compliances to the respective control rooms</p> <p>Do not use diesel and kerosene generators</p> <p>Maintain vehicles properly (PUC certificate, replace car air filter, maintain right type pressure)</p> <p>Minimize unnecessary travel, use public transport and avoid using private vehicles</p>

Annexure 3: Air quality monitoring stations to be set up in Delhi and NCR**Plan for strengthening of Air Quality Monitoring Stations****1. Haryana State Pollution Control Board**

S. No.	State	Name of District HQ	Existing Stations		Stations Planned	
			Manual	Real-time	Manual	Real-time
1	Haryana	Faridabad	2	1 (CPCB)	NIL	2 (CPSU + HSPCB)
2	Haryana	Gurugram	NIL	1 (HSPCB) + 1 (IITM)	NIL	1 (HSPCB)
3	Haryana	Mahendragagh	NIL	NIL	2	1 (HSPCB)
4	Haryana	Bhiwani	NIL	NIL	2	1 (HSPCB)
5	Haryana	Mewat	NIL	NIL	2	1 (HSPCB)
6	Haryana	Rohtak	NIL	1 (HSPCB)	2	NIL
7	Haryana	Sonepat	NIL	NIL	2	1 (HSPCB)
8	Haryana	Rewari	NIL	NIL	2	1 (HSPCB)
9	Haryana	Jhajjar	NIL	NIL	2	1 (HSPCB)
10	Haryana	Panipat	NIL	NIL	2	1 (HSPCB)
11	Haryana	Palwal	NIL	NIL	2	1 (HSPCB)
12	Haryana	Jind	NIL	NIL	2	1 (HSPCB)
13	Haryana	Karnal	NIL	NIL	2	1 (HSPCB)
Total			2	4	22	Total =13 (1=CPCB + 12=HSPCB)

2. Uttar Pradesh Pollution Control Board

S. No.	State	Name of District HQ	Existing Stations		Stations Planned	
			Manual	Real-time	Manual	Real-time
1	UP	Meerut	2	NIL	NIL	3 (CPSU)
2	UP	Ghaziabad	2	NIL	NIL	1 (CPCB)
3	UP	Gautam Buddh Nagar	2 (Noida)	1 (IITM-Noida)	2 (Gr. Noida)	1 (CPCB in Noida) 1 (UPPCB in GN)
4	UP	Bulandsahar	2	NIL	Nil	1 (UPPCB Khurja)
5	UP	Baghpat	NIL	NIL	2	1 (UPPCB)
6	UP	Hapur	2	NIL	Nil	1 (UPPCB)
7	UP	Muzzafarnagar	NIL	NIL	2	1 (UPPCB)

Total	10	1	6	10
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3. Rajasthan State Pollution Control Board

S. No.	State	Name of District HQ	Existing Stations		Stations Planned	
			Manual	Real-time	Manual	Real-time
1	Rajasthan	Alwar	6 (3 in Alwar & 3 in Bhiwadi)	NIL	NIL	1(CPCB at Bhiwadi) 1 (RSPCB at Alwar)
2	Rajasthan	Bharatpur	3	NIL	NIL	NIL
Total			9	0	0	2

4. Delhi Pollution Control Committee

S. No.	State	Name of District HQ	Existing Stations		Stations Planned	
			Manual	Real-time	Manual	Real-time
1	Delhi	Delhi	10 (CPCB)	6 (CPCB) + 4 DPCC + 8 (IMD)	NIL	20 (DPCC)
Total			10	18	0	20

Annexure 4: EPCA letter no. EPCA-R/2017/L-12 dated March 3, 2017**ENVIRONMENT POLLUTION (PREVENTION & CONTROL) AUTHORITY
for the National Capital Region****Dr Bhure Lal
Chairman****EPCA-R/2017/L-12
March 03, 2017****Dear** *Sh. Kuttu*

Hon'ble Supreme Court in its order dated 6.2.2017 had directed that it would be appropriate for all the concerned authorities, namely EPCA, government of Delhi as well as the governments of NCR i.e. governments of Haryana, Rajasthan and Uttar Pradesh along with CPCB hold a joint meeting within a period of two weeks from today and thereafter come up with one comprehensive plan merging plans of CPCB, EPCA and Delhi Government.

EPCA held meetings on February 10 and February 20, 2017 with representatives from CPCB, environment department of NCT Delhi, governments of Haryana, Rajasthan and Uttar Pradesh regarding the preparation of the plan. It was agreed that CPCB, EPCA and Delhi Government would merge their existing plans and that this document would be sent to the states of Haryana, Uttar Pradesh and Rajasthan for their review and finalization.

Based on this decision, the draft comprehensive action plan for air pollution control has been prepared, which merges all the previous plans.

The prepared plan is attached for your kind perusal and review. EPCA proposes to call a meeting to discuss the plan and to take on board comments by state governments at the end of the month.

Thanking you,*[Signature]*
**(Bhure Lal)
Chairman, EPCA****To****Dr. M. M Kuttu, IAS
Chief Secretary, Govt of NCT Delhi
Delhi Secretariat, I.P. Estate
New Delhi -110002****Central Pollution Control Board**

Parivesh Bhawan, East Arjun Nagar, Near Karkardooma Courts, Shahdara, Delhi 110 032
Tel/Fax: 22301955 (CPCB), Tel: 24623060 (R)-Dr. Bhure Lal, Chairman

Annexure 5: EPCA letter no. EPCA-R/2017/L-20 dated March 3, 2017

**ENVIRONMENT POLLUTION (PREVENTION & CONTROL) AUTHORITY
For the National Capital Region**

**Dr Bhure Lal
Chairman**

**EPCA-R/2017/L-20
March 14, 2017**

Dear

EPCA has already sent to you the Draft "Comprehensive Action Plan for Air pollution Control" vide our letter No EPCA-R/2017/L-12, through e-mail dated March 03, 2017. We presume that your concerned field officers and experts have studied the proposals in details and must have formed their views for further improvement.

A final report is to be submitted to Hon'ble Court in the 1st week of April, after incorporating the views of all the stakeholders participants.

EPCA is convening a **meeting on March 31, 2017 (Friday) at 3:00 pm** in the office of Chairman EPCA, Core 6A, 3rd Floor, Indian Habitat Centre, Lodhi Road, New Delhi-110003 to consider the views of all the participants

You are requested to ensure to forward your views to EPCA immediately and also ensure participation at senior level in the meeting on March 31, 2017

Copy of Court order is attached for your perusal

Yours faithfully,

Sd/-

**(Bhure Lal)
Chairman, EPCA**

To

Central Pollution Control Board

Parivesh Bhawan, East Arjun Nagar, Near Karkardooma Courts, Shahdara, Delhi 110 032
Tel: 43102444, Tel: 24623060 (R)Dr. Bhure Lal, Chairman

Annexure 6: Minutes of EPCA meeting held on March 31, 2017

**Minutes of the Meeting of the reconstituted EPCA for NCR region held under the
Chairmanship of Shri Bhure Lal at 3:00 pm on 31.3.2017 in the office of Supreme Court
Monitoring Committee, Core 6A, Third Floor, India Habitat Centre**

Agenda items: Comprehensive action plan for air pollution control in Delhi-NCR region.

In attendance**Chairman and Members EPCA**

1. Dr. Bhure Lal, Chairman, EPCA
2. Ms. Sunita Narain, Member, EPCA
3. Dr. A.K. Bhagi, Member, EPCA
4. Mr. Vishnu Mathur, Member, EPCA
5. A B Akolkar, Member, EPCA

Representatives of concerned agencies

1. S C Yadav, MS, UPPCB
2. Mayank Jyoti, RTO, Ghaziabad
3. Raghwendra Pratap Singh, Jt. Director, Dept. of Horticulture, UP
4. Ravindra Godbole, Secy. Ghaziabad Development Authority
5. K. Mohan, Architect-Planner, TCTD, UP
6. Dr. R K Yadav, Ghaziabad Nagar Nigam
7. Dr. Anil Kumar, Director, Dept. of Environment, GNCTD
8. K C Gupta, Rajasthan State Pollution Control Board
9. Prabal Pratap Singh, SP, Traffic, NOIDA
10. S M Ali, Spl. Scy, Environment & Forest, GNCTD
11. Prashant Gargava, Addl. Director, CPCB
12. J P S Deshwal, North Delhi Municipal Corporation
13. K K Pohani, Delhi Jal Board
14. Dinesh Kumar Gupta, DCP, Traffic, Delhi Police
15. Balbir Singh, Dept. of Transport, Haryana
16. Vishvajit Sahay, Jt. Secy., Dept. of Heavy Industry, GoI
17. Dr. K K Khandelwal, Addl. Chief Secy. , Dept. of Environment, Haryana
18. S Narayanan, MS, HSPCB
19. Rajiv Kumar Jain, SE, SDMC
20. Dr. Chetna Anand, Scientist, Dept. of Environment, GNCTD
21. R K Tyagi, SE, EDMC

22. Pramod Vashisit, North Delhi Municipal Corporation
23. Anjani Kumar Singh, Dept. of Geology & Mining, UP
24. Ashok Prasad, Under Secy. , MoRTH
25. Dr. P K Sharma, NDMC
26. A K Pandey
27. O P Singh
28. Pravina Choudhary
29. Sunil Kumar

Chairman, EPCA said that the draft Comprehensive Action Plan for Delhi NCR for air pollution control prepared in compliance of the Hon' ble Supreme Court order dated 6.2.2017 in W.P. (C) 13029 of 1985: M.C. Mehta vs UoI & Ors. was circulated by EPCA to Govt. of Delhi and three states i.e. Govt. of Haryana, Uttar Pradesh and Rajasthan vide e-mail dated 3.3.2017 to examine/ study and provide comments for modification or addition of new action points in the plan.

This meeting is convened for finalization of the plan based on the inputs of the Government's in compliance of the Hon' ble Supreme Court order dated 6.3.2017. The state-wise responses are as under:

State of Haryana

Chairman, Haryana State Pollution Control Board informed that the draft plan was circulated to all concerned departments for inputs and further Chief Secretary of Haryana convened two meetings to discuss the plan and to finalise implementation schedules for the actions listed in the plan. He informed that there are no comments on the plan.

State of Uttar Pradesh

Member Secretary, Uttar Pradesh Pollution Control Board informed that the draft plan was circulated to all concerned departments for inputs and further Chief Secretary, Uttar Pradesh convened two meetings to discuss the plan. MS, UPPCB informed that there are no comments on the plan except on point 2.1.2 regarding setting up of real time ambient air quality monitoring stations. He informed that the deadline of setting up of real time stations by July 2017 will not be complied due to delay in tendering process because of state elections. But he assured EPCA that the stations would be set up before October 2017 and would provide a schedule to EPCA.

MS, UPPCB further submitted a compliance report on the action points listed in the plan based on the progress cum status received from the concerned departments except for U.P. Traffic Police. U.P. Traffic Police representative provided the progress cum status report to UPPCB during the meeting for forwarding the same to EPCA.

State of Rajasthan

Regional Officer, Bhiwadi, Rajasthan State Pollution Control Board informed that the draft plan was circulated to all concerned departments for inputs and further Chief Secretary, Rajasthan convened one meeting to discuss the plan. R.O., RSPCB informed that there are no comments and further submitted a compliance report on the action points listed in the plan based on the progress cum status received from the concerned departments.

Government of National Capital Territory of Delhi

Member Secretary, Delhi Pollution Control Committee informed that the draft plan was circulated to all concerned departments for inputs and further Hon'ble Lieutenant Governor, Delhi convened a meeting to discuss the plan and priority actions were finalized for review of compliance within one month. MS, DPCC made the following suggestions:

1. Time lines for implementation of action points given in the plan shall be finalized by EPCA after consultation with the concerned departments.
2. The departments responsible for implementation of action points shall be specified where so ever not specified in the plan.

Comments of Members, EPCA on Draft Comprehensive Action Plan**2.2.1 Registration of BS VI compliant vehicles from April 1, 2020**

Mr. Vishnu Mathur, Member, EPCA expressed that registration of BS VI complaint vehicles from April 01, 2020 will require vehicles manufacturers to pre-pone vehicle manufacturing by one year. This is not possible considering the fact that switching over from production of BS IV compliant vehicles to BS VI compliant vehicles is a major leapfrogging and that there are technological challenges involved, hence, this issue needs further discussion before recommending the given timelines to the Hon' ble Court.

Chairman, EPCA responded that the intentions of the Hon' ble Supreme Court are very clear from its order dated 293.2017 permitting only improved engine vehicle registration when better quality fuel is available nationwide. Hence, vehicle manufacturers shall be prepared for registration of BS VI compliant vehicles from April 01, 2020 in light of the spirit of the said Court order. EPCA further informed that Ministry of Petroleum of Natural Gas is further expected to achieve BS VI fuel availability nationwide from April 01, 2019 onwards as against April 01, 2020 and in case the same is achieved the vehicle manufacturers shall get prepared accordingly.

Prof. A.K. Bhagi, Member, EPCA also agreed with views of EPCA and further clarified whether views of Mr. Vishnu Mathur will be submitted to Court as views of EPCA or of SIAM. Chairman, EPCA said that his view is not the view of entire EPCA and will be sent in report as views of SIAM in the report to be submitted to the Court.

2.2.2 Action on dieselization

Imposition of EPC (Environment Protection Charge) on diesel vehicles with 2000 cc and above - Mr. Vishnu Mathur expressed that such recommendation to the Court was not fair as the vehicle is meeting the current law and in future the products meeting the current law shall not be recommended for penalty.

EPCA responded that it does not agree with the views of Mr. Vishnu Mathur as such steps are needed to combat rising air pollution levels in Delhi-NCR and in this case due to increasing number of registration of diesel vehicles in the city.

Tax measures are needed to nullify incentives for diesel cars over petrol cars - Mr. Vishnu Mathur, expressed that the said recommendation in the report shall be modified and the following shall be submitted to the Court that “in order to remove the price disparity between petrol and diesel cars, Central Govt. should equalize taxation on fuel”.

EPCA agreed to include above recommendation in the report as recommendation of SIAM.

2.2.3 Expand CNG program across NCR

Mr. Vishnu Mathur expressed that expansion of CNG post introduction of BS VI fuel needs to be deliberated by an expert group comprising vehicle manufacturers, vehicle certifying agencies and scientists in the field of vehicular pollution considering the on road emissions expected from both the fuels and based on the expert group view recommendations on fuel use can be given.

Prof. A.K. Bhagi, Member, EPCA agreed with views of Mr. Vishnu Mathur and added that the expert group shall further give its views on formulation of secondary particulates from emissions released by both the fuels and their role in ambient air quality and on health of people.

EPCA requested CPCB to look into the matter.

2.1.5 Research studies including air pollution inventory, source apportionment, health impact studies, exposure impacts and other relevant studies – CPCB representative expressed that two committees have been constituted which will scrutinize and approve the appropriate proposals received on the subject matter and details of such studies being undertaken will be shared with EPCA. It was agreed that the draft plan would be accordingly revised to reflect the fact that CPCB would finalize the research studies with the relevant committees and keep EPCA informed on the outcomes.

2.7.3 The agenda on the ban on unacceptable and dirty fuels was discussed. EPCA raised the issue with the representatives and member asking if they had any comments to offer on this agenda item. It was agreed that this agenda should be included so that these fuels are banned in NCR.

Compliance of the Hon’ ble Supreme Court order dated March 29, 2017

During the meeting, EPCA also discussed the matter of compliance of the Hon’ble Supreme Court order dated 29.3.2017 regarding registration of only BS IV compliant vehicles for which proof of sale of vehicle on or before 31.3.2017 is submitted to the registering authorities. EPCA informed that it has been brought to its notice that fake proofs are being submitted for purchase of BS III compliant vehicles before March 31, 2017. EPCA asked state Transport Departments of Delhi, Haryana, Rajasthan and Uttar Pradesh how they would comply with the order of the Hon’ble Supreme Court. Transport Department representatives informed EPCA that the following is to be produced by vehicle owner for considering registration from April 01, 2017:

1. Proof of tax, fees and insurance documents submitted by vehicle dealer to Transport Department on or before March 31, 2017 for registration. Furthermore, they explained that all tax is remitted daily by the dealers to the online portal of the transport department. Therefore, only those vehicles would be registered where the tax, insurance and fees had

been paid and this had been forwarded to the respective state transport departments by mid-night of March 31, 2017.

2. This would also be followed in the case of temporary registration certificate, which is issued where vehicle chassis is sold initially and vehicle body is procured at later stage. In this case as well, only those BS III vehicles would be registered post April 1, 2017 where the tax, fee or insurance had been remitted for temporary registration to the respective transport department.
3. EPCA asked MoRTH representative to ensure compliance of the Hon'ble Supreme Court order by all states and union territories and further ensure submission of above information to EPCA. It was also agreed that EPCA would write to all CS to request them to follow the above procedure as it would ensure compliance with the orders of the Hon'ble Court.

The meeting ended with a vote of thanks to the Chair.

Annexure 7: Suggestions received for the Comprehensive Action Plan**Central Pollution Control Board (CPCB) Comments****CPCB's Comments on Draft Comprehensive Action Plan for Air Pollution Control in Delhi & NCR**

The draft Comprehensive Action Plan submitted by EPCA to Hon'ble Supreme Court on March 02, 2017 for air pollution control for Delhi & NCR has been examined, and comments are as below:

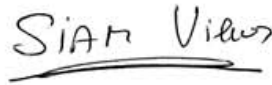
General

1. The action points which are directed by Hon'ble Supreme Court may be grouped together for strict compliance.
2. The actions covered under Graded Response Action Plan (GRAP), which has been annexed, may be deleted from the comprehensive plan to avoid duplication.
3. While the guiding principle mentions toxicity based prioritization of actions, the same is not reflected in the action points. Action points in respect of sources with toxic pollutants/priority sources may be grouped as primary/ pivotal actions. The measures which require progressive continuous actions, and are not priority from health impact point of view may be grouped separately as secondary/ auxiliary actions.
4. Activities for implementation in Delhi, NCR region or both may be clearly identified.
5. The activities with financial implications such as penalty, fare integration, common ticketing, incentive, taxation, etc. needs to be categorized separately and views from concerned ministries sought.

Specific

1. There are 18 real time monitoring stations in operation in Delhi, item 2.1.1 may be corrected accordingly.
2. In U.P. 10 manual and one real time monitoring stations are in operation, and six manual and 10 real time are planned. Item 2.1.2 may be changed accordingly.
3. Item 2.1.5: "Expertise.....research proposals" may be replaced with "Studies using EPC funds may be taken up as per the concept note submitted by CPCB to the Hon'ble Supreme court."

4. Item. 2.2.1: The notification regarding implementation of BS-IV and BS VI emission norms is applicable for vehicles manufactured on or after given dates, and not registration of vehicles.
5. Item 2.2.2: The responsible agency for actions regarding tax measures is not CPCB. Its role is for collection and utilization of EPC funds.
6. Item 2.2.5: It may be informed that CPCB had already issued Directions for installation of stage I & II vapor recovery systems in all the retail outlets with capacity 300 KLM and more, in 46 million plus cities by December 2017.
7. Item 2.2.12: Hydro testing of CNG cylinder may be omitted as it is related to safety aspect.
8. Item 2.3.10: BRTS/ LRTS implementation in high frequency routes may be reconsidered.
9. Item 2.7.5: Information from CEMS are required for enforcement and therefore available to the pollution control authorities and not on open platform. The action point may be reconsidered.
10. Item 2.7.8: Please refer comments line above.
11. The point no. 3 regarding institutional arrangement for implementation: As per the Graded Action Plan, the role of CPCB Task Force is to suggest additional measures in case of emergency or severe plus categories.

Society of Indian Automobile Manufacturers (SIAM) Comments**Comments on Comprehensive Action Plan****1. Date of Implementation of BS VI**

Practically this means that we will prepone the date of manufacturing by almost 1 year. 3 years timeline itself is a big challenge for industry. 2 years will be even more tough. If the date of 1st April 2020 is changed to registration, then industry has to stop manufacturing BS IV vehicles by April 2019. However, as the fuel is expected to come only by September 2019, BS VI production can only start from that date, thus leaving inadequate time for disposal of stocks.

2. Tax Incentives on diesel cars to be nullified

This is due to fiscal policy of GOI. Cost of production of petrol and diesel is similar. In both cases, consumer is paying more than the production cost. Also the taxation on both is extremely high even now. In fact, the tax is even higher than the production cost. There is no justification for such a fiscal recommendation that has nothing to do with improving air quality directly.

Already, diesel cars are attracting 25% higher road tax in Delhi and in many States. The initial cost of diesel cars is also higher by about Rs. 1 lakh and they therefore contribute a much higher burden of taxation as compared to petrol cars.

3. CNG

We need to take expert views whether CNG should be expanded at the BS 6 level as the PM emissions in CNG, petrol and diesel is same. Although there is a very marginal increase of 25% in NO_x in diesel as compared to CNG, however, the CO benefit of diesel is substantial at 50%, with added advantage of lower CO₂, which is a global warming gas.

In future PM1 could become an issue once the knowledge on the impact on health is made clearer, which would be higher in CNG.

Therefore, expert views are required before we make this recommendation.

4. Battery Operated Vehicles

We agree with recommendation. However, there has to be a sustained thrust to ensure penetration.

5. On-Road Vehicles – Tighten PUC Norms

The Indian PUC norms are in line with the European Regulations and would continue to evolve along with the EU norms.

We need to analyse the existing data after the existing PUC regime is upgraded and actual data is available.

As of now adequate data is not available due to which it may not be appropriate to make recommendations on further tightening of norms.

Also until the PUC system is made more robust, any further tightening would only result in more malpractices.

6. General Recommendation should be that any product that is meeting the environmental/emission standards duly notified by GOI should not be termed as a polluter or penalised in any way. However, if EPCA feels that the standards are not tight enough, EPCA could recommend tightening of the standards to GOI.
7. Wherever possible, a cost-benefit analysis based on Data should be done to prioritise the different measures for reducing air pollution.

Delhi Traffic Police compliance

Note on efforts of Delhi Traffic Police to check air pollution in NCT of Delhi

In order to check air pollution in the NCT of Delhi, the following efforts are continuously undertaken by Delhi Traffic Police:-

1. Parking of vehicles in the non designated areas –During the year, 2016, a total of 6,76,301 motorists were prosecuted; whereas in the current year 2017 (upto 28.02), a total of 1,68,904 motorists have been prosecuted for improper/obstructive parking. It is a continuous ongoing process to prosecute such offenders by enforcement officers of Delhi Traffic Police and the same is rigorously enforced.
2. Decongest pathways – Encroachment removal drives are periodically undertaken in coordination and association with land owning agencies as and when the requests are received from them to decongest pathways. Recently, the Hon'ble L.G., Delhi has constituted Task Force teams for each traffic range in the NCT of Delhi. DCsP/Traffic Ranges have been made the convenor of these Task Force with members from PWD, MCD, DDA (UTTIPEC) and Transport Department, GNCT of Delhi. Congested traffic corridors have been identified by the Task Force which are being undertaken for improvement action through engineering improvements, traffic regulation and enforcement action.
3. Intelligent traffic management system – The Intelligent Traffic Management System (ITMS) which is part of Safe City Project, has been envisaged at the cost of Rs. 441.29 crores and the same is under consideration with the Ministry of Home Affairs. The earlier Detailed Project Report prepared by M/s Price Water Cooper (PWC) shall be reworked upon as directed by Ministry of Home Affairs, Govt. of India. Presently, Delhi Police does not have the services of the consultant to prepare the DPR. The Detailed Project Report of the ITMS will be prepared once the sanction of the Pilot project is obtained and the consultant for the project is appointed. Similarly, the proposal for Pilot Intelligent Traffic Management System (ITMS) (71.70 crores) has also been submitted on SFS file for approval of the competent authority in the Ministry of Home Affairs (GOI). On the Detailed Project Report earlier prepared by M/s PWC has been re-examined by the technical experts and the suggestions have been taken on record for future implementation as and when the sanction of the Competent Authority from Govt. of India is obtained.
4. Introduction of early alarm system for benefit of commuter to reduce traffic congestion of major routes and route diversions – The traffic situation on road of Delhi is quite dynamic in terms of traffic volume, traffic density on various corridors and other major roads. Major break down on signal free roads causes accumulation/ congestion of traffic and results in long queue and longer travel time. The Variable Message Signboards will flash the traffic situation and road condition to the motorists so that in case of accidents/blockage, they can choose alternate options. The Delhi

Traffic Police is currently installing 50 VMS with 3G connectivity at 50 important locations on the major travel corridors with a compatible Control Room at Traffic Police Headquarters. This project is aimed at facilitating the commuters including pedestrians with centrally collated and analyzed messages for planning city journey. The VMS shall display important traffic related information that will cut travel time and will help the motorists in avoiding traffic congestion and taking alternate route. The project is likely to be commissioned before 31st March, 2017.

5. Carriage of construction material in covered vehicles – During the year 2016, a total of 747 such motor vehicles were prosecuted whereas during the current year, 2017 (upto 07.03), a total of 170 such motor vehicles have been prosecuted. It is a continuous ongoing process to prosecute such offenders by enforcement officers of Delhi Traffic Police and the same is rigorously enforced.
6. Action against visibly polluting vehicles – During the year 2016, a total of 1,00,738 motor vehicles were prosecuted whereas during the current year 2017 (upto 07.03), a total of 14,244 such motor vehicles have prosecuted for driving without carrying valid PUC. It is a continuous ongoing process to prosecute such offenders by enforcement officers of Delhi Traffic Police and the same is rigorously enforced.
7. Returning of non-destined goods vehicles from Delhi borders - Non-destined goods vehicles are regularly checked at border entry points of the NCT of Delhi and returned by field officers of Traffic Unit. Additional deployment of traffic staff has been made at the borders to return non-destined goods vehicles. During the year 2016, a total of 81,023 goods vehicles checked and more than 14,983 non destined goods vehicle were turned back by traffic police. Similarly, during the current year (upto 7.3.2017), a total of 77,219 goods vehicles have been checked and 12,784 non destined goods vehicles have been returned from the borders. It is an ongoing process for which necessary action is undertaken by Delhi Traffic Police.
8. Action against 15 years or more old de-registered diesel motor vehicles - During regular special drives started from 8.11.2016, a total of such 79 de-registered motor vehicles were prosecuted/impounded upto 31.12.2016. Similarly, in the year 2017 (upto 07.03), 28 such de-registered motor vehicles have been prosecuted and impounded. It is a continuous ongoing process to prosecute such offenders by enforcement officers of Delhi Traffic Police and the same is rigorously enforced.

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Rajasthan Government comments

राजस्थान सरकार
परिवहन विभाग

क्रमांक :- प.22(250) परि/प्रवर्तन/रिट/2016/32504 जयपुर, दिनांक :- 28/03/17

निदेशक एवं संयुक्त शासन सचिव
पर्यावरण विभाग, राजस्थान, जयपुर।

विषय :- Comments on the draft of comprehensive action plan for
Air Pollution Control in NCR.

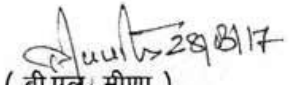
संदर्भ :- आपका पत्र दिनांक 15.03.2017 के क्रम में।

महोदय,

उपरोक्त विषयान्तर्गत संदर्भित पत्र के क्रम में निवेदन है कि उक्त प्रकरण से संबंधित बिन्दुओं पर आप द्वारा चाही गई टिप्पणी संलग्न कर आवश्यक अग्रिम कार्यवाही हेतु सादर प्रेषित है।

भवदीय,

संलग्न :- उपरोक्तानुसार।


(बी.एल. मीणा)
अपर परिवहन आयुक्त (प्र.नि.)

Point No.	Department Action taken/comments on Comprehensive Action Plan for air pollution control
2.2.1	Transport Department, Rajasthan has issued directions to NCR districts of Alwar and Bharatpur for ensuring registration of only BS-IV vehicles from April 1, 2017. Copy of direction dated 16.02.2017 is attached as Annex-1.
2.2.4	For promoting use of battery operated vehicles Complete exemption on payment of tax is provided. Notification issued on tax exemption is attached as Annex-2.
2.2.6	Transport Department has initiated networking of all Authorised Pollution Check centres. The work of networking is in progress.
2.2.10	Extensive drive will be launched against visibly polluting vehicles in the NCR sub region Rajasthan from time to time. Adequate measures will be taken to aware people in the regard. In the year 2016-17 till february 2017 action against 4457 no. of vehicles have been taken in NCR region, Rajasthan for not possessing valid pollution under control certificate.
2.2.14	Transport Department, Rajasthan is taking strict action against overloading in goods vehicles. In the year 2016-17, till Feb-2017 action against 9105 no. of vehicles have been taken in the NCR sub-region of Rajasthan. [Alwar and Bharatpur]

Uttar Pradesh Government Comments

कार्यालय परिवहन आयुक्त
उत्तर प्रदेश।

लखनऊ: दिनांक: 28 मार्च, 2017

पत्र संख्या-387/स0सु0/2017-33प्रावि/2016

सेवा में,

विशेष सचिव,
पर्यावरण,
उत्तर प्रदेश शासन।

विषय:- ओ0ए0 संख्या-21/2014 बर्द्धमान कौशिक बनाम यूनियन आफ इण्डिया व अन्य तथा ओ0ए0 संख्या-118/2013 विक्रान्त कुमार तोंगड़ बनाम यूनियन आफ इण्डिया में वायु प्रदूषण के रोकथाम एवं नियंत्रण हेतु ड्राफ्ट काम्प्रिहेन्सिव एक्शन प्लान के संबंध में प्रमुख सचिव, पर्यावरण की अध्यक्षता में दिनांक 27.03.2017 को आहूत बैठक में उपलब्ध कराये गये पाँच कॉलम के प्रारूप पर सूचना प्रेषण के संबंध में।

महोदय,

कृपया उपर्युक्त विषयक ओ0ए0 संख्या-21/2014 बर्द्धमान कौशिक बनाम यूनियन आफ इण्डिया व अन्य तथा ओ0ए0 संख्या-118/2013 विक्रान्त कुमार तोंगड़ बनाम यूनियन आफ इण्डिया में वायु प्रदूषण के रोकथाम एवं नियंत्रण हेतु उपलब्ध कराये गये ड्राफ्ट काम्प्रिहेन्सिव एक्शन प्लान का संदर्भ ग्रहण करने का कष्ट करें, जिसके सापेक्ष दिनांक 27.03.2017 को प्रमुख सचिव, पर्यावरण द्वारा पांच कॉलम में निर्धारित प्रारूप पर परिवहन विभाग की टिप्पणी अंकित करते हुए आख्या साफ्ट व हार्ड कॉपी में उपलब्ध कराये जाने का निर्देश दिया गया था। उपर्युक्त के अनुपालन में निर्धारित प्रारूप में साफ्ट व हार्ड कॉपी में आख्या प्रेषित है। कृपया ग्रहण करने का कष्ट करें।

संलग्नक-यथोक्त।

भवदीय,

(गंगाफल),

अपर परिवहन आयुक्त (स0सु0/आई0टी0),
उत्तर प्रदेश।

पृ0सं0-387(1)/स0सु0/2017/समदिनांकित

प्रतिलिपि निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित-

1-अनु सचिव, परिवहन अनुभाग-4 के पत्र संख्या-406/तीस-4-2017-25(सा0)/2016

दिनांक 17.03.2017 के क्रम में सूचनार्थ प्रेषित।

2-मुख्य पर्यावरण अधिकारी, वृत्त-1, उ.प्र.प्रदूषण नियंत्रण बोर्ड, पिकप भवन, गोमती नगर।

(गंगाफल),

अपर परिवहन आयुक्त (स0सु0/आई0टी0),
उत्तर प्रदेश।

मूल पर नहीं

प्रतिलिपि, अद्वितीय, पर्यावरण प्रदूषण एवं नियंत्रण
प्रदूषण (EPCA) नपी दिल्ली के सचिव उति
सूचनार्थ प्रेषित।

(गंगा फल)
अपर परिवहन आयुक्त (स0सु0/आई0टी0)
उत्तर प्रदेश

**A meeting to finalize
comprehensive Action Plan for
Air Pollution Control**

S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
	Short-term priority action			
2.1.2	<p>This includes –</p> <p>1. Uttar Pradesh has 10 manual and 1 real time monitoring stations, with one each in Ghaziabad and Noida. Real time stations will be set up by March 2017.</p>		U.P.P.C.B.	<ul style="list-style-type: none"> • CAAQM Stations at Ghaziabad & Noida has been installed and are in operation. 05 No. new CAAQMS are to be installed, each at G.Noida, Baghpat, Buland Shahar, Hapur & Muzaffar Nagar. • In Bagpat, Muzaffar Nagar & G.Noida 02 No. (each) Mannual AAQMS are to be installed. • Process of Procurement is under progress.

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S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
	Short-term priority action			
2.1.3	Enforce Graded Response Action Plan	Ongoing	All Concerned Deptt. Of U.P.	The Transport Department is enforcing the graded response access plan as already submitted.
2.1.4	Undertake satellite-based monitoring for tracking and enforcing agriculture waste burning		Remote Sensing, Agriculture	
2.1.5	Research studies including air pollution inventory, source apportionment, health impact studies, exposure impacts and other relevant studies.		Environment Deptt. , U.P.P.C.B.	Signing of MOU with IIT Delhi for Source apportionment studies of Ghaziabad city is under process



• 2.2 Action to reduce vehicular emissions

S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
	EMISSION AND FUEL QUALITY FOR NEW VEHICLES			
	Short-term priority action			
2.2.1	Ensure registration of only BS IV vehicles from April 1, 2017 and only BS VI-compliant vehicles from April 2020	April 1, 2017 and April 1, 2020	Transport Dept.	1-The registration of BS-IV vehicles will be mandatory from 01-04-2017 as per Central Motor Vehicle Rules amendment notification dated 19-08-2015 2- The norms of BS-VI vehicles will be followed by 01-04-2020 as per the Central Motor Vehicle Rules amendment notification dated 16-09-2016
2.2.2	Action on dieselization: The SC order dated 12.8.2016 has imposed an environment pollution charge of 1% on registration of diesel vehicles with 2,000 cc and above. A fund has been created from this revenue to fund pollution control efforts. Tax measures are needed to nullify incentives for diesel cars over petrol cars.	Ongoing	Transport Deptt.	The realization of 1% environment pollution charge on the registration of diesel vehicles with 2000 CC and above is being complained in territory of UP and NCR also.



S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
	Medium-term action			
2.2.4	Introduce battery-operated vehicles in targeted segments of two-wheelers, three-wheelers and buses. Identify and notify commercial areas in cities with high footfalls and good public transport and goods transport connectivity that can be pedestrianized, supported by zero emission battery-operated vehicles.	3 months	Transport Department, Urban Development, Infrastructure & Industrial Development	<p>The battery operated two-wheelers are fully exempted from payment of taxes, three-wheelers (e-rikshaw & e-cart) are in operation in territory of UP and NCR area. The related notification issued by Central Govt. for e-cart and e-rikshaw regarding necessity of permit has been abolished under sub section 3 of section 66 of CMVR, 1988, although that notification empowers the state govt. to restrict the use of such vehicles with different regions like congestion etc.</p> <p>2- Three-wheeler battery operated e-rikshaw has been introduced and such vehicles are plying to provide last mile connectivity but such vehicles have to be registered to obtain fitness certificate, insurance certificate, PUC certificates and to pay taxes and drivers have to be driving license holders.</p> <p>3-For other points activity will be completed within the stimulated time.</p>
2.2.5	Install vapour recovery systems in fuel refueling outlets to reduce benzene emissions in NCR.	6 months from date of approval One year from date of approval	Transport Dept., Food & Civil Supply	Transport Department will assist and co-operate the concerned departments.

S.No.	Action Points	Target date from the date of approval	Agency Responsible in U.P.	Comments
	ON-ROAD VEHICLES			
	Short-term priority action			
2.2.6	Auditing of Pollution under Control (PUC) certification centres.	EPCA report on PUC will review the current state and suggest a way ahead	Transport Deptt.	There are more than 900 PUC centers recognized by the Transport Department. For periodical inspection and auditing strict instructions have been sent several times and repeated instructions have been sent not only NCR officers but whole of UP. 2- For proper monitoring of such center the Department is in the process of connecting all the centers on net working system so that mal-practices of the centers may be minimized or abolished.
2.2.7	Tighten PUC norms for post-2000 vehicles. Upgrade in-use emissions testing for diesel vehicles.		Transport Deptt.	Since PUC norms have been prescribed by the Central Govt. in rule 115 of CMVR, 1989 and also in use vehicles emission norms for diesel vehicles, hence tightening of norms and up gradation can be done by the Central Govt. by amending above rules.
2.2.8	Implement an on-board diagnostic system fitted in new vehicles for vehicle inspection. Improve facilities for its implementation.		Transport Deptt.	Since BS-IV wheeled vehicles manufactured on and after 01-04-2017 such system will be already fitted.
2.2.9	Link PUC certificates with annual vehicle insurance to ensure 100 per cent compliance.	Immediately from date of approval	Transport Deptt.	We are in process of linking PUC certificates with annual vehicle insurance . It is also to mention that Committee on Road Safety constituted by Hon'ble Supreme Court has also already directed for such compliances.

S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
	Short-term priority action			
2.2.10	Enforcement of law against visibly polluting vehicles: impose penalty, launch extensive awareness drive against polluting vehicles.	3 months	Transport Deptt.	These are being done and instructions have already being sent for extension awareness for such erring vehicles.
	Medium-term action			
2.2.12	Ensure requisite infrastructure for hydro testing of CNG cylinders in Delhi and NCR.		Transport Deptt.	The Transport Dept. will co-ordinate with the concerned departments.
	Short-term priority action			
2.2.14	Check overloading.	Immediate	Transport, Traffic Police	Effects are being made regularly apart from special drives and in present from 24-03-2017, such drives are continue against overloading.

S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
	Medium-term action			
2.2.15	Fast track construction of Western and Eastern Peripheral Expressways.	Ongoing	P.W.D.	



• 2.3 Strategies to reduce vehicle numbers on roads

S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
	Short-term priority action			
2.3.6	Need bus fare policy to ensure that it is affordable and remains competitive <i>vis-a-vis</i> the operational cost of two-wheelers.		Transport Deptt.	For effective fare policy study is essential and as per study report necessary steps will be taken accordingly.
2.3.7	Enforce bus lanes and keep them free from obstruction and encroachment.		Transport , Urban Development, Traffic Police, Infrastructure & Industrial Development	Transport Department has no direct rule at this point but the department is co-ordinating and will co-ordinate to the concerned departments.
2.3.9	Three-wheelers Implement electro-mobility for three-wheelers to make them zero emission as efficient feeder system for last mile connectivity and integration with bigger public transport systems. Organise their services for efficient deployment.		Transport Deptt.	The battery operated three-wheelers(e-rikshaw and e-cart) are being registered whole of UP liberally and as mentioned earlier such types of vehicles have no need to obtain permit.

S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
	Medium to long-term action			
2.3.13	Demarcation and development of Influence Zones around Metro stations as per MPD-2021 to improve access to the public transport system.		Transport, PWD, Development Authorities	This issue is not related to the Transport Department but as and when concerned departments will need assistance from this Department. The department will assist accordingly.
2.3.14	Proper regulations and organization including providing driver-training, certification, etc. for cab and auto-rickshaw drivers		Transport, Deptt.	1-For proper driving training at about 200 private driving training schools have been recognized by the departments. 2- Many auto-manufacturing companies like Maruti, Hyundai have opened such centers and providing good training to the drivers. 3- Department is trying to establish automated driving training track (ADTT) at two places at present by Central Govt. assistance. Institute of Driving Training and Research Institute to provide training to the drivers and trainers also is under construction nearby Raibareilly. 4- For proper Motor Vehicle Certification one such centre is under construction at Lucknow with the assistance of Central Govt. and one centre is going to be constructed at Kanpur City by the State Govt. funding.
2.3.15	NCR connectivity for public transport – need bus and Metro plans. Rationalize routes and augment public transport in NCR on CNG mode.		Transport Deptt., Urban Development, Infrastructure & Industrial Development	1-Connectivity of Public Transport in NCR like Meerut, Hapur, Ghaziabad and Gautambudh Nagar (where CNG is available) are all the public transport system is on the CNG mode. 2- For rationalization of rules necessary instructions have been given to the officers concerned in NCR area of UP.
2.3.16	Rationalize entry taxes in NCR under the NCR reciprocal agreement to lower costs of travel by public transport.		Transport Deptt., Urban Development, Infrastructure & Industrial Development	1-There is no entry tax in UP coming from other NCR states on contract carriage vehicles concerned with contract carrier regiment. 2- From other NCR states along with other state public vehicles taxes to be realized for UP have already been rationalized in 2012.

S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
	Medium to long-term action			
2.3.17	Integrate ITS in bus systems in cities in NCR (automated vehicle location, passenger information system, fare collection system).		Transport Deptt.	UPRTC is probably doing so but for private sector buses such system may be commenced but the govt. will have to subsidized for fitment of such systems as in private sector public transport system is not much viable.
2.3.18	Regional Rapid Transit System (RRTS) integrated with local transit systems should be implemented to provide seamless connectivity between regional and sub-regional centres of NCR.		Transport Deptt.	UPRTC is probably doing so but for private sector buses such system may be commenced but the govt. will have to subsidized for fitment of such systems as in private sector public transport system is not much viable.
2.3.19	Integrated passenger terminals to be created with mixed use and multi-modal facilities for passenger comfort, integrating regional and local public transit systems.		Transport Deptt.	UPRTC is probably doing so but for private sector buses such system may be commenced but the govt. will have to subsidized for fitment of such systems as in private sector public transport system is not much viable.
2.3.20	Implement traffic impact assessment of infrastructure project for planning and management.		Infrastructure & Industrial Development, Urban Development, Transport Deptt.	It is not related to the transport department.

• 2.4 Non-motorized transport (NMT) network

S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
	Short-term priority action			
2.4.1	Prepare and implement zonal plans for developing an NMT network.	3 months	PWD, Traffic Police, Infrastructure & Industrial Development, Urban Development	It is not related to the transport department.
	Synchronization of signals should be implemented on a priority basis with an integrated IT-based traffic management system.		Traffic Police	

S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
	Short-term priority action			
	Cycle sharing systems being introduced as feeders to public transport to be expanded to cover entire Delhi.		Infrastructure & Industrial Development, Urban Development	
	Identify and notify key commercial areas with high footfalls and good public transport connectivity to create pedestrian plazas.		Infrastructure & Industrial Development, Urban Development	
	Make safety and walkability audits of walking and cycling infrastructure mandatory.		Infrastructure & Industrial Development, Urban Development	
	Encroachment of NMT lanes to be made punishable offence under the current provision of law.		Infrastructure & Industrial Development, Urban Development, Housing & Town Planning	

• 2.5 Parking policy to reduce congestion and pollution

S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
2.5.1	Preparation & Finalization for Parking policy and enforcement measures .		Traffic Police, Urban Development, Infrastructure & Industrial Development, Housing & Town Planning	
	Short-term priority action			
2.5.2	ENFORCEMENT AND MANAGEMENT			
	<ul style="list-style-type: none"> •Physically demarcate legal parking areas. Equip them with metering systems, proper signages, IT for information on parking availability to reduce cruising time and on-street management. •Existing / planned public parking facilities and on-street and off-street parking (including multi-level) facilities should be bundled for management by a single agency/operator. New stand-alone parking only sites are mostly not required since parking is permitted in all use zones. 		Urban Development Infrastructure & Industrial Development, Housing & Town Planning, Traffic Police	It is not related to the transport department.

S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
	Short-term priority action			
2.5.2	ENFORCEMENT AND MANAGEMENT			
	Parking facilities within developments (e.g. commercial/ residential/ institutional) should be shared and priced for enabling use by different types of users during different times of the day, thus bringing down total parking space demand.		Urban Development Infrastructure & Industrial Development, Housing & Town Planning	
	Plan and implement parking provision for buses, commercial vehicles and IPT-NMT modes, and for the differently-abled.		Transport, Urban Development Infrastructure & Industrial Development, Housing & Town Planning	
	Short-term priority action			
2.5.3	PARKING PRICING AND PENALTY			
	Introduce and further upgrade variable time-based pricing, as per market demand. Coordinated off-street and on-street / surface pricing in commercial and residential areas, and parking permits in residential areas. Parking should be charged as per duration, location in city and size of the vehicle.		Urban Development, Infrastructure & Industrial Development, Housing & Town Planning	

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S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
2.5.3	PARKING PRICING AND PENALTY			
	Take steps to prevent parking of vehicles in the non-designated areas. Penalties related to parking should be charged 10 times the parking fee along with impounding of vehicles after a certain level of violation. Strict penalty for violation of parking regulations and walkway encroachment. Parking on footpaths should be made a cognizable offence under the Delhi Municipal Corporation Act and Police Act.		Urban Development, Infrastructure & Industrial Development, Housing & Town Planning	
	Reform parking lease agreements to increase parking revenue for local area development and public transport improvement.		Urban Development, Infrastructure & Industrial Development, Housing & Town Planning	



2.6 Traffic management

S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
2.6.1	<ul style="list-style-type: none"> Introduce early alarm system during traffic congestion . 		Traffic Police	
2.6.2	<ul style="list-style-type: none"> Consider introducing plan for flexi / staggered timings to minimize peak movement of vehicles on roads. 		Traffic Police	
2.6.3	<ul style="list-style-type: none"> Synchronize traffic movements / introduce intelligent traffic systems for lane-driving. 		Traffic Police	
2.6.4	<ul style="list-style-type: none"> Formulate action plan for controlling decongestion of fuel stations including increasing the number of dispensing machines. 		Food & Civil Supply	
2.6.5	<ul style="list-style-type: none"> Electronic monitoring of traffic violations. 		Traffic Police	

2.6 Traffic management

S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
2.6.6	<ul style="list-style-type: none"> Examine existing framework for removing broken down buses / trucks from roads and create a system for speedy removal and ensuring minimal disruption to traffic from such buses / trucks. 		Transport & Traffic Police,	It is not related to the transport department.
2.6.7	<ul style="list-style-type: none"> Conduct audit of traffic intersections and install functional traffic signals at all major intersections in all NCR cities. 		Transport & Traffic Police	It is not related to the transport department.
2.6.8	<ul style="list-style-type: none"> Conduct review of traffic signaling system at all intersections in Delhi / Noida and Gurugram and other NCR towns that are traffic hotspots and bring requisite changes to reflect the traffic movement pattern at intersections. 		Transport & Traffic Police	It is not related to the transport department.
2.6.9	<ul style="list-style-type: none"> Enforce lane driving through heavy fining as in Mumbai. 		Transport & Traffic Police	Will be done with the co-ordination of traffic police but the main descending authority have to create awareness and to provide requisite material with the transport department and traffic departments and their co-ordination will also be required.

• 2.7 Power plants and industries

S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
	Short-term priority action			
2.7.4	Strict enforcement of air pollution control measures in all industries, includes those located in unauthorized areas.		UPPCB, District Administration	Action is regularly being taken.
2.7.5	Ensure calibration and working of Continuous Emission Monitoring System (CEMS) in all industries in NCR and provide information of pollution levels on an open platform.		UPPCB	Considering the cost CEMS should be installed only in large scale Air Polluting Industries.
	BRICK-KILNS			
2.7.6	Convert all brick kilns to zigzag technology - - natural draft kilns to induced--draft kilns (zigzag technology).		UPPCB	Directions Issued to all Brick Kilns in NCR to installed to convert to Zig Zag technology & installed ID.

S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
	INCINERATORS			
	Medium to long-term action			
2.7.7	Implementation of strict emission norms for incinerators and examining the feasibility of less polluting alternatives.		UPPCB	Already Implemented
2.7.8	Implement CEMS for incinerators and provide data on emissions on an open platform.		UPPCB	Being implemented
	WASTE-TO-ENERGY PLANTS			
2.7.10	Strict implementation of emission norms and linkage of emission data to DPCC.		U.P.P.C.B.	There is no waste to energy plant in NCR

• 2.8 Generator sets

S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
	Short-term priority action			
2.8.1	•Ensure that only those DG sets that meet the standards are allowed to operate.		UPPCB, District Administration	Consent is granted only to those DG sets in industries which are achieving standards.
2.8.2	•Operating time of DG sets should be regulated according to graded action plan.		UPPCB, District Administration	DG Sets in Industries are stand by & used only at the time of Power failure.
2.8.3	•Only approved fuel should be allowed.		UPPCB, District Administration	HSD / CNG is used as Fuel in Generator Sets.
2.8.4	•Non-usage of DG sets in social events as per graded action plan.		District Administration	
	Medium to long-term action			
2.8.5	•Alternate power systems should be promoted in cell towers, and use of DG sets may be discouraged.		District Administration	

2.9 Open burning (including solid waste and agricultural residues)

S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
	Short-term priority action			
2.9.1	SC order dated 16.12.2015 has directed a complete ban on garbage burning in the entire NCR region. This is being monitored by Delhi and NCR state governments. Take stringent action against open burning of biomass / leaves / tyres etc to control such activities and submit periodic status reports.		Urban Development, Infrastructure & Industrial Development, Housing & Town Planning	
2.9.2	Ensure proper collection of horticulture waste (biomass) and composting-cum-gardening approach; municipal zonal offices should be responsible for controlling burning of leaves and garbage on roads / parks. All horticulture agencies should have compost pits in parks.		Horticulture, Urban Development, Infrastructure & Industrial Development, Housing & Town Planning	

S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
	Short-term priority action			
	REGIONAL PROBLEM OF BIOMASS BURNING			
2.9.4	Ensure strict enforcement of ban on burning of agriculture waste and crop residues.		Agriculture Deptt.	
2.9.5	To increase subsidy for purchase of equipment that eliminates the need for burning stubble and straw.		Agriculture Deptt.	
2.9.6	Enforce the series of directives from the Hon'ble Supreme Court and NGT on ban on agricultural burning and recycling and reuse of this waste.		Agriculture Deptt.	
	EPISODIC EVENTS			
2.9.7	Fire crackers -- SC order of November 25, 2016 has banned sale of fire crackers in Delhi and NCR. Monitor its implementation and enforcement		District Administration	



• 2.10 Domestic chulha burning and open eateries

S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
	Medium to long-term action			
2.10.1	Slums and low-income neighbourhoods, as well as roadside eateries etc use biomass and coal widely. Promote the use of LPG instead of these fuels in restaurants / dhabas / road-side eateries.		District Administration	
2.10.2	Prohibit use of coal in hotels and restaurants, eliminate use of kerosene for cooking in NCR and incentivize move to LPG.		District Administration	
2.10.3	A targeted programme can be developed with the Union Ministry of Petroleum and Natural Gas for wider distribution of LPG.		Food & Civil Supply, District Administration	

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• 2.11 Control measures for road dust

S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
	Medium to long-term action			
2.11.1	<ul style="list-style-type: none"> Implement street design guidelines for footpaths and cycle tracks with adequate vegetative buffers and paving of roads. Take steps for blacktopping / pavement of road shoulders to avoid road dust. 	Immediate	Urban Development, Infrastructure & Industrial Development, Transport Department, PWD, Housing & Town Planning	It is not related to the Transport Department.

• 2.11 Control measures for road dust

S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
	Medium to long-term action			
	<ul style="list-style-type: none"> •Phase-in mechanical / vacuum-based street sweeping wherever feasible; introduce wet / mechanized vacuum sweeping of roads. •Implement truck loading guidelines; use of appropriate enclosures for haul trucks; gravel paving for all haul routes. •Sprinkling of recycled water (without compromising other uses); introduce water fountains at major traffic intersections, wherever feasible. •Maintain pot hole-free roads for free flow of traffic to reduce emissions and dust. •Increase green cover in Delhi. Undertake greening of open areas, gardens, community places, schools and housing societies. 	Immediate	Urban Development , Infrastructure & Industrial Development, Housing & Town Planning	

S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
	Medium to long-term action			
2.11.2	•Enforcement of air pollution control in concrete batching (use of water spray and wind breakers, bag filter at silos and enclosures, hoods, curtains etc)		Infrastructure & Industrial Development, Housing & Town Planning	



• 2.12 Control measures for construction dust

S. No.	Action points	Target date from the date of approval	Agency Responsible in U.P.	Comments
	Short-term priority action			
2.12.1	Undertake control measures for fugitive emissions from material handling, conveying and screening operations through water sprinkling, curtains, barriers and dust suppression units. Penalties have also been enhanced. Needs enforcement.		Infrastructure & Industrial Development, Housing & Town Planning.	
	Medium to long-term action			
2.12.2	For material handling and construction demolition, it should be obligatory on part of the developers to provide evidence of debris disposal at designated sites. Promote recycling of construction material.		Infrastructure & Industrial Development, Housing & Town Planning, Nagar Vikas	



Graded Response Action Plan for Reducing Air Pollution

The graded measures according to AQI are listed from public health emergency level to downward. The measures are cumulative. Emergency and Severe levels include cumulatively all other measures listed in the lower levels of AQI including Very Poor, Poor and Moderate. It is also clear that the actions listed in the poor category need to be implemented throughout the year. But during months when weather conditions turn more adverse there is need for greater scrutiny on enforcement.

All the buses, e-rikshaw, E-cart, CNG bases taxicabs are only permitted on local permits and city permits.



Severe (When $PM_{2.5}$ levels are above $250 \mu g/m^3$ or PM_{10} levels are above $430 \mu g/m^3$)

S. No.	Action to be taken	Sub Actions	Concerned Department	Concerned Officers	Action taken
1	Close brick kilns, Hot Mix Plants, Stone Crushers.	<ul style="list-style-type: none"> • Inspection by team/squad • Identification of violating brick kilns, Hot Mix Plants, Stone Crushers • Notice under Air Act • Issuance of closure order • Legal Action 	District Administration, Environment, PWD, Geology & Mining	DM, SP, RO UPPCB, Ex. En. PWD, Ex. En. UPPCL., Distt. Mining Officer.	
2	Intensify public transport services. Introduce differential rates to encourage off-peak travel.	<ul style="list-style-type: none"> • Increasing CNG based city buses • Metro rail planning • Battery run Rickshaw • CNG based taxi/cabs • Encouragement of Car Pooling • Cycle line • Introduction of parking fee at differential rate varying from peak traffic hours • Challan for illegal parking 	Transport, Home, Nagar Vikas, Awasthapana & Indl. Development, Housing and Urban planning	RTO, SP Traffic, Nagra Ayukta/ Ex. Office Nagar Palikar, CEO Noida/G. Noida, Chief Urban Town planner. For contract carriage vehicles either buses or taxies permits are being issued but granted liberty.	



S. No.	Action to be taken	Sub Actions	Concerned Department	Concerned Officers	Action taken
3.	Increase frequency of mechanized cleaning of road and sprinkling of water on roads. Identify road stretches with high dust generation.	<ul style="list-style-type: none"> • Identification of Road stretched with higher dust generation • Assessment of requirement of mechanical Cleaning devices of Roads • Procurements of devices • Regular monitoring of functioning of devices 	PWD, Urban Development, Industrial Development, Housing & Urban Planning.	Ex. En. PWD, Nagar Ayukta, Ex. Officers Nagar Palika, CEO Noida/ G. Noida, Town planner, Ex. En. Housing & Dev. Board	



Very Poor (When PM_{2.5} levels are between 121-250 µg/m³ or PM₁₀ levels are between 351-430 µg/m³)

S. No.	Action to be taken	Sub Actions	Concerned Department	Concerned Officers	Action taken
1	Stop use of diesel generator sets	<ul style="list-style-type: none"> Inventory of DG sets Notice under Air Act/Public nuisance Act Action for confiscating DG sets 	Energy Deptt., District Administration, Environment	Exn. (Electrical safety), DM, RO UPPCB	
2	Enhance parking fee by 3-4 times	<ul style="list-style-type: none"> Assessment of parking fee Notification 	Urban Development, Industrial Development, Housing & Urban Planning.	Nagar Ayukta/ Ex. Officers Nagar Palika, CEO Noida/G.Noida	
3	Increase bus and metro services by augmenting contract buses and increasing frequency of service buses.	<ul style="list-style-type: none"> Assessment of requirement of buses/metro service Procurement & permit to contract buses Maintenance 	Transport, District Ad., Nagar Vikas & District Administration	RTO, To wn planner, DM For contract carriage and other taxies plying on CNG mode the permits are being issued and granted liberly.	

3	Stringently enforce pollution control in thermal power plants through PCB monitoring	<ul style="list-style-type: none"> • Inspection • Advice on corrective measures 	Energy & Environment	CGM Thermal Power Plant, RO UPPCB	
4	Do periodic mechanized sweeping on roads with heavy traffic and water sprinkling also unpaved roads every two days.	<ul style="list-style-type: none"> • Assessment of requirement • Procurement of Mechanical Sweeping machine and water sprinkling 	Nagar Vikas, Industrial Development, District Administration	Nagar Ayukta Nagar Nigam / Ex. Officer Nagar Palika, CEO Noida/ G. Noida	



5	<p>Strict vigilance and no tolerance for visible emissions – stop plying of visible polluting vehicles by impounding or heavy fine.</p>	<ul style="list-style-type: none"> • Advertisement for non plying of polluting vehicles • PUC centers • Reporting • On spot challans • Cancelation of Registration/ seizing of vehicle after repetition of incident 	Transport & Home	<p>RTO, SP Traffic</p> <p>For contract carriage vehicles either buses or taxies permits are being issued but granted libery.</p>	
6	<p>Strict vigilance and enforcement of PUC norms</p>	<ul style="list-style-type: none"> • Advertisement for non plying of polluting vehicles • PUC centers • Reporting • On spot challans • Cancelation of Registration/ seizing of vehicle after repetition of incident 	Transport & Home	<p>RTO & SP Traffic</p> <p>All the activities for strict vigilance for visible emissions necessary actions are being taken as per law.</p>	



S. No.	Action to be taken	Sub Actions	Concerned Department	Concerned Officers	Action taken
4	Stop use of coal / firewood in hotels and open eateries.	<ul style="list-style-type: none"> • Inventory of Hotels using coal/ firewood • License to Hotels and Open eateries using clean fuel • Notice to hotel/ eateries using coal and firewood • closure & legal action 	District Administration, Nagar Vikas, Food & Civil Supply	DM, Nagar Ayukta and Ex. Officers Nagar Palika, DSO	
5	Residential Welfare Associations and individual house owners to provide electric heaters during winter to security staff to avoid open burning by them	<ul style="list-style-type: none"> • Awareness through Workshop, Meetings, Distribution of Pamphlet, Electronic media 	District Administration RWAs Nagar Vikas, & Health Department	DM, RWAs NagarAyukta/ Ex. Officer Nagar Palika & CMO	
6	Alert in newspapers/TV/radio to advice people with respiratory and cardiac patients to avoid polluted areas and restrict outdoor movement.	<ul style="list-style-type: none"> • Awareness through Workshop, Meetings, Distribution of Pamphlet, electronic media 	District Administration RWAs, Environment & Health Department	DM, RWAs, RO UPPCB & CMO	

Moderate to poor (Poor –When $PM_{2.5}$ levels are between 91-120 $\mu g/m^3$ or PM_{10} levels are between 251-350 $\mu g/m^3$ Moderate – When $PM_{2.5}$ is between 61 – 90 $\mu g/m^3$ PM_{10} is between 101-250 $\mu g/m^3$)

Sl. No.	Action to be taken	Sub Actions	Concerned Department	Concerned Officers	Action taken
1	Stringently enforce/stop garbage burning in landfills and other places and impose heavy fines on person responsible	<ul style="list-style-type: none"> • Survey and Identification of garbage burning site • Reporting of incidents • Action/penalty against the defaulters • Proper segregation of waste 	Nagar Vikas, Industrial Development	Nagar Ayukta Nagar Nigam / Ex. Officer Nagar Palika, CEO Noida/ G. Noida, Town planner,	
2	Close / stringently enforce all pollution control regulation in brick kilns and industries	<ul style="list-style-type: none"> • Survey and Identification of garbage burning site • Notice • Closure order • Legal Action 	District Administration, Mining & Environment	DM, Distt. Mining Officer, RO UPPCB	



7	Stringently enforce rules for dust control in construction activities and close non-compliant sites.	<ul style="list-style-type: none"> • Identification of violating project through inspection • Notice • Penalty and legal action 	Awasthapna & Industrial Development	Ex. En. Housing and Dev. Board & CEO Noida/ G. Noida, VC Development Authorities	
8	Deploy traffic police for smooth traffic flow at identified vulnerable areas	<ul style="list-style-type: none"> • Identification of vulnerable areas • Requirement of Traffic Police • Deployment of traffic police • Monitoring 	Home	SP Traffic	

9	Strictly enforce Supreme Court order on diversion of non-destined truck traffic and ensure only trucks registered after 2005 are allowed entry into NCR	<ul style="list-style-type: none"> • Display of diversion signs before entry point of NCR • Planning for diversion of Trucks • Deployment of Traffic Police for checking of registration at entry points and stop their entry • Strengthening of diversion roads 	Home, Transport Department	RTO, SP Traffic Diversion are being ensured by Police and the department is in touch and co-ordination of police department. So for as plying trucks this is being ensured.	
10	Strictly enforce Supreme Court ban in firecrackers	<ul style="list-style-type: none"> • Stop manufacturing units • Cancellation of license for wholesaler • Identification of sites for sale of firecrackers • Awareness 	Home	DM & SP	



11	Ensure fly ash ponds* are watered every alternate day during summer month (March-May)	<ul style="list-style-type: none"> Monitoring of sites Deployment of water sprinklers Notice 	Energy Department	CGM Thermal Power Plant	
12	Information dissemination Social media, mobile Apps should be used to inform people about the pollution levels, contact details of control room, enable them to report polluting activities/sources to the concerned authorities, and actions that will be taken by government based on the level of pollution.	<ul style="list-style-type: none"> Usages of Electronic media and print media. Installation of real time ambient air Analyzer Awareness in schools Awareness in social events Seminar, meetings etc. 	Home, Environment, Agriculture, Nagar Vikas	DM, RO UPPCB, Distt. Information Officer, DIOS/BSA	

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THANKS

कार्यालय परिवहन आयुक्त
उत्तर प्रदेश।

लखनऊ: दिनांक: 28 मार्च, 2017

पत्र संख्या-387/स0सु0/2017-33 प्रावि/2016

सेवा में,

विशेष सचिव,

पर्यावरण,

उत्तर प्रदेश शासन।

विषय:-ओ0ए0 संख्या-21/2014 वर्द्धमान कौशिक बनाम यूनियन आफ इण्डिया व अन्य तथा ओ0ए0 संख्या-118/2013 विक्रान्त कुमार तोंगड़ बनाम यूनियन आफ इण्डिया में वायु प्रदूषण के रोकथाम एवं नियंत्रण हेतु ड्राफ्ट काम्प्रिहेन्सिव एक्शन प्लान के संबंध में प्रमुख सचिव, पर्यावरण की अध्यक्षता में दिनांक 27.03.2017 को आहूत बैठक में उपलब्ध कराये गये पाँच कॉलम के प्रारूप पर सूचना प्रेषण के संबंध में।

महोदय,

कृपया उपर्युक्त विषयक ओ0ए0 संख्या-21/2014 वर्द्धमान कौशिक बनाम यूनियन आफ इण्डिया व अन्य तथा ओ0ए0 संख्या-118/2013 विक्रान्त कुमार तोंगड़ बनाम यूनियन आफ इण्डिया में वायु प्रदूषण के रोकथाम एवं नियंत्रण हेतु उपलब्ध कराये गये ड्राफ्ट काम्प्रिहेन्सिव एक्शन प्लान का संदर्भ ग्रहण करने का कष्ट करें, जिसके सापेक्ष दिनांक 27.03.2017 को प्रमुख सचिव, पर्यावरण द्वारा पांच कॉलम में निर्धारित प्रारूप पर परिवहन विभाग की टिप्पणी अंकित करते हुए आख्या साफ्ट व हार्ड कॉपी में उपलब्ध कराये जाने का निर्देश दिया गया था। उपर्युक्त के अनुपालन में निर्धारित प्रारूप में साफ्ट व हार्ड कॉपी में आख्या प्रेषित है। कृपया ग्रहण करने का कष्ट करें।

संलग्नक-यथोक्त।

भवदीय,

(गंगाफल),

अपर परिवहन आयुक्त (स0सु0/आई0टी0),
उत्तर प्रदेश।

पृ0सं0-387(1)/रा0सु0/2017/समदिनांकित

प्रतिलिपि निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित-

1-अनु सचिव, परिवहन अनुभाग-4 के पत्र संख्या-406/तीस-4-2017-25(सा0)/2016

दिनांक 17.03.2017 के क्रम में सूचनार्थ प्रेषित।

2-मुख्य पर्यावरण अधिकारी, वृत्त-1, उ.प्र.प्रदूषण नियंत्रण बोर्ड, पिकप भवन, गोमती नगर।

(गंगाफल),

अपर परिवहन आयुक्त (स0सु0/आई0टी0),
उत्तर प्रदेश।

मूल पर नहीं

**प्रतिलिपि, अद्वितीय, परिवहन प्रदूषण एवं नियंत्रण
प्रदूषण (EPCA) नीति दिल्ली की अंतिम प्रति
रूचनार्थ प्रेषित।**

(गंगाफल)
अपर परिवहन आयुक्त (स0सु0/आई0टी0)
उत्तर प्रदेश