

REPORTABLE**IN THE SUPREME COURT OF INDIA
CIVIL ORIGINAL JURISDICTION****IA NOS.158128 AND 158129 OF 2019****IN****WRIT PETITION (C) NO.13029 OF 1985****M.C. MEHTA****...PETITIONER****VERSUS****UNION OF INDIA & ORS.****...RESPONDENTS****ORDER**

1. The matter pertains to the environment pollution with which we are faced with today. Not only the air pollution is being caused unabatingly, but we are also faced with the pollution of rivers in the country. With respect to the pollution been caused in Delhi and NCR, this Court while considering IA No.127792 of 2017 has passed various orders and disposed of the application dated 29.1.2018 and while taking up the matter relating to the aforesaid Interlocutory Application on 14.10.2019 required the Ministry of Environment, Forest and Climate Change, Government of India to submit its response along with a status report. The matter was thereafter listed on 4.11.2019. Report No.106 was filed by EPCA with respect to pollution in hot spots in Delhi and NCR regions. Following order was passed by this Court

on 4.11.2019:

“We have heard Mr. Bhurelal, who has pointed out about irrigation.

We have also heard some experts from the Ministry and the IIT and learned senior counsel for the parties and Amicus Curiae.

Today everyone is concerned about level of pollution in Delhi and NCR region. This is not something new, every year this kind of piquant situation arises for a substantial period. It is compounded by the fact that year to year in spite of various directions issued by High Court, other authorities including this Court the State Governments, Government of NCT of Delhi and the corporations of Delhi and nearby States are not performing their duties as enjoined upon them. This is a shocking state of affairs in which we are put as on today. This is blatant and grave violation of right to life of the sizeable population by all these actions and the scientific data which has been pointed out indicates that life span of the people is being reduced by this kind of pollution which is being created and that people are being advised not to come back to Delhi or to leave the Delhi due to severe pollution condition which has been created. There cannot be large scale exodus. People have to perform their duty in Delhi also and people cannot be evacuated from Delhi being a capital city. We are at a loss to understand why we are not able to create a situation in which this kind of pollution does not take place, that too in a routine manner every year. Obviously, it is writ large that the State Governments, Government of NCT of Delhi and civic bodies have miserably failed to discharge their liability as per the directive principles of State Policy which have found statutory expression, they are being made statutory mockery and also the directions of this Court and High Courts in this regard are being violated with impunity.

Time has come when we have to fix the accountability for this kind of situation which has arisen and is destroying Right to Life itself in gross violation of Article 21 of the Constitution of India. No farmer can be said to be having a right under the guise that he is not having sufficient time to use the stubble for the purpose of manure, since they have less time between two crops, cutting and sowing of next crop. As such, they cannot by burning it in their fields, put life of sizeable population in jeopardy.

It is apparent from the satellite images which have been produced before us for the period 30.10.2019 to 04.11.2019. The satellite image clearly indicates that in Punjab there is widespread stubble burning which has taken place as compared to Haryana, in which only in four districts it has taken place. There is some burning in Western U.P. also. It could not have taken place even in a singular district or gram panchayat area as we live in a civilized country in which such kind of activities which create such menacing pollution not only in the area concerned but to the neighboring States also, by ill-effects of that people cannot be left to die or to suffer various ailments.

Everybody has to be answerable including the top state machinery percolating down to the level of gram panchayat. The very purpose of giving administration power up to the panchayat level is that there has to be proper administration and there is no room for such activities. The

action is clearly tortuous one and is clearly punishable under statutory provisions, besides the violation of the Court's order. In the circumstances, as widespread stubble burning has taken place, we direct the States of Punjab and Haryana and adjoining State of Uttar Pradesh where there is blatant violation which has taken place, to halt it. We direct the Chief Secretaries of the States of Punjab, Haryana and Uttar Pradesh to be present in this Court on 06.11.2019 including Chief Secretary of Government of NCT of Delhi.

We direct the Chief Secretaries of the State Governments, District Collectors, Tehsildars, Director General, IG/SP and other police officers of the area of concerned police station and the entire police machinery to ensure that not even a single incident takes place of stubble burning henceforth. If it is found that any stubble burning has been made not only that person doing it will be hauled up for the violation of the order passed by this Court but the entire administration, right from the Chief Secretary, Commissioner, Collector and all other concerned functionaries and Panchayats. Gram Pradhan/Sarpanch Panchayat are also directed to ensure that no such stubble burning takes place.

Let the State Governments of Punjab, Haryana and Uttar Pradesh and officials also explain that why they should not be asked to pay the compensation for tortious liability as they have acquiesced and due to their failure in preventing stubble burning which is in utter violation of the Public Trust doctrine, why they should not be held liable to compensate, and also the incumbents who are burning the stubble in spite of clear restrictions imposed by this Court and statutory prohibition.

We also direct the Sarpanch of each and every Panchayat and SHO of the concerned area to prepare inventory of the incumbents who have burnt the stubbles in their fields. We also direct the Sarpanch, Gram Panchayat as well as the concerned police of the area and local administration including the Collector and all subordinate authorities to ensure that no further stubble burning takes place. In case, any stubble burning takes place responsible machinery from top to bottom and Sarpanch, Gram Panchayat shall be liable for tortuous act and for not complying with the order passed by this Court and let the Gram Panchayat also advise forthwith the villagers not to involve in stubble burning any more and take appropriate action.

We also direct the State Governments, Central Government as well as the Government of NCT of Delhi to take immediate steps to take care of the emergent situation due to air pollution which has taken place. No doubt about it that everybody knows the situation, let the steps be taken forthwith with the help of the experts. We direct the Government of NCT of Delhi as well as various corporations to work in tandem and to see that waste and garbage which is contributing to air pollution is tackled at war level. The efforts should be made right from today without any loss of time.

Let the EPCA consider as it was suggested by Ms. Aprajita Singh, learned senior counsel and the learned Amicus Curiae that diesel vehicle should not enter the Delhi. Let the EPCA immediately take the steps in this regard as may be considered appropriate as it has the power to do the needful taking care of the emergent situation.

With respect to demolition and construction activities we direct that no demolition and construction activities take place in Delhi and NCR region. In case it is found that such activity is done, the local administration as well as the municipal authorities including the Zonal Commissioners, Deputy Zonal Commissioners shall be personally held responsible for all such activities. They have to act in furtherance of the Court's order and to ensure that no such activity takes place.

We are informed that use of coal based industries have been stopped. In case any violation of this is found the concerned person including Zonal Deputy Commissioner would be liable for violation of the order of this Court and liable to be punished for contempt of Court.

It was also pointed out by Mr. Sanjiv Sen, learned senior counsel, that during odd/even scheme in Delhi more use of two wheelers and three wheelers has taken place and they are being plied more causing equal pollution, as such no useful purpose is being served by stopping the use of certain vehicles only on the basis of odd and even numbers. He has also pointed out that it would be appropriate to stop the use of diesel vehicle, in case it is necessitated as the diesel vehicles cause more pollution as compared to petrol and CNG vehicles. Let the Government of NCT of Delhi explain this aspect and file the data in this regard in the Court on the basis of the previous experience and whether if three wheelers and taxis are plying more on road during such restriction and relevant data be placed.

During Odd/Even Scheme what is the difference being caused by stopping use of four wheelers when various other contributory factors are not taken care of by Government of NCT of Delhi. An affidavit has been filed by the Ministry of Environment and Forest, in which in paragraph 10 following facts have been mentioned. Air quality, winter inspections 2019-20 status till 31.10.2019 is extracted hereunder:-

“AIR QUALITY WINTER INSPECTIONS’ (2019-2020) STATUS – till 31.10.19

Total complaints lodged : 1646

Total inspections – 249

Major Sources reported

C &D	Open Dumping of waste / garbage	Unpaved Road/ Pit	Road Dust	Garbage Burning	Traffic Congestion
496	407	201	154	126	81

Source	Delhi	NCR
C&D	<ul style="list-style-type: none"> • New Delhi District (10.3%) • East district (9.8%) • West district (8.2%) 	<ul style="list-style-type: none"> • Noida (12%) • Faridabad (11.7%) • Gurugram (South) (10.9%) • Ghaziabad (8.5%)

Open dumping of waste/garbage	<ul style="list-style-type: none"> • New Delhi District (17.44%) • East district (14.98%) • South district (7.8%) 	<ul style="list-style-type: none"> • Noida (9.58%) • Faridabad (8.84%) • Gurugram (South) (6.14%) • Ghaziabad (5.4%)
Unpaved Road/ Pit	<ul style="list-style-type: none"> • South West (10.59%) • East & south district (9.67%) • North West district (7.37%) 	<ul style="list-style-type: none"> • Ghaziabad (12.44%) • Faridabad (9.21%) • Noida (8.75%)
Road Dust	<ul style="list-style-type: none"> • East District (22.72 %) • North West district (7.14%) • North district (5.8%) 	<ul style="list-style-type: none"> • Ghaziabad (16.23%) • Meerut (11.6%) • Noida (8.44%) • Sonipat (5.84%)
Garbage Burning	<ul style="list-style-type: none"> • North west District (13.5%) • North district (10.3%) • North East district (9.5%) 	<ul style="list-style-type: none"> • Gurugram (South) (15.1 %) • Noida (12.7%) • Faridabad (9.5 %)
Traffic Congestion	<ul style="list-style-type: none"> • North District (23.5%) • East district (13.6%) • Central district (11.1%) 	<ul style="list-style-type: none"> • Ghaziabad (4.9%) • Noida (3.7%)

Major polluting activities defined in identified hotspot regions :

1. Jahangirpuri

- Open dumping of garbage & C&D
- Traffic congestion

2. Rohini

- Road dust
- Open dumping of garbage

3. Bawana

- C&D & Unpaved roads
- Open dumping of garbage & road dust

4. Ashok Vihar

- Open dumping of garbage & C&D
- Road dust

5. **Wazirpur**
 - Open dumping of garbage
 - C&D
6. **Vivek Vihar**
 - Traffic congestion
 - C&D
 - Open dumping of garbage & road dust
7. **Anand Vihar**
 - C&D
8. **Punjabi Bagh**
 - C&D
9. **Mundka**
 - Unpaved roads
 - C&D and industrial waste dumping
10. **Narela**
 - Industrial waste – dumping & burning
 - Garbage – dumping & burning
11. **Okhla**
 - Open dumping of garbage
 - Open dumping of industrial waste and C&D
12. **Dwarka**
 - C&D
 - Unpaved road
13. **Mayapuri**
 - Unpaved road
 - Road dust
14. **Sahibabad**
 - Unpaved road
 - Road dust
 - Open waste dumping
 - C&D
15. **Udyog Vihar**
 - Open dumping of garbage
 - Unpaved roads
16. **Faridabad**
 - C&D
 - Open dumping of garbage
 - Unpaved roads
 - Open burning
 - Industrial waste dumping

As per the Air Quality Inspection Construction and demolition activities in Delhi/NCR region causing damage in NOIDA, Faridabad, Gurugram, Ghaziabad as well as instances of Delhi have also been mentioned.

1. Construction and demolition
2. There is open dumping of waste/garbage.
3. Unpaved road/pit.
4. Road dust.
5. Garbage burning.
6. Traffic congestion.

We direct that construction, demolition and activities be stopped forthwith as well as garbage burning. In case, any person is found in construction and demolition activity and garbage burning in Delhi and NCR region, he/she shall be penalized. Any person is doing construction and demolition activity in violation of this order, shall be penalized with Rs.1 Lac for such activity. For garbage burning he/she shall be penalized with Rs.5,000/- and besides liable for violation of the order passed by this Court to be dealt with in accordance with law.

With respect to open dumping of waste and garbage, we direct the Government of NCT of Delhi as well as the concerned Municipal Corporation to chalk out immediate plan and to ensure that waste and garbage to be removed to safe places forthwith and also to ensure that no open dumping takes place. We direct Zonal Deputy Commissioner to be responsible with other officers in this regard. Let road-maps be prepared so as to provide proper amenities in order to prevent open dumping of waste and garbage, and be placed before this Court within four weeks.

For taking care of the road dust let water sprinklers/dust suppressors be used on the roads. An IIT expert suggested about the appropriate water pressure for the sprinklers. At what pressure water should be sprinkled so as to reduce the pollution and dust so that it does not add to the pollution. Let the Corporations act on advice of the expert of the IIT. Such roads where traffic congestion is more, let traffic plan be also prepared in such a manner so that there is no extra burden on a particular road so that traffic congestion is taken care of. It is for the concerned traffic authorities to take immediate steps in this regard.

Since we are fixing the liability on the person responsible for inaction at the village level as well as three States in the NCR regions as well as Delhi, let the widest publicity by all means of publication i.e. Television, Media, newspapers, Radio be made. In Gram Panchayats by beat of drums also and other modes to ensure that villagers are made aware of their responsibility and liability towards the other humans so that they do not involve in such acts. Let the Gram Panchayat, police station, district and taluk levels by the concerned administration take steps in this regard. Let the State Governments also take the requisite steps to extinguish the stubbles which are burning and for that let State Level High Level Committee meet forthwith and take appropriate decision and implement it. Steps taken be informed to this Court on 06.11.2019 by the concerned Chief Secretaries of the three States and Government of NCT of Delhi.

Let the concerned authorities of EPCA meet forthwith and take a call in this regard with respect to industrial activities which are causing pollution how to control it. We also direct all pollution control Boards of

three States and Government of NCT of Delhi that polluting industries/activities against norms are put to halt forthwith.

It was also submitted by M/s. Sanjiv Sen and Gopal Sankaranarayanan, learned senior counsel that in certain States generators are also being used which increase pollution mainly due to cut off of the electricity supply. Generators in Delhi also add to pollution in Delhi as well as in NCR region. Let the State Governments and Government of NCT of Delhi ensure that electricity is not cut so that generators are not used and let no generators be used till next date of hearing except in emergency/healthcare services.

Let the State Governments, NCT of Delhi and also the Government of India prepare a road map for preventing this kind of situation in future and be placed before this Court, within three weeks. Let the Action Taken Report be submitted within four weeks.

Directions/order to be effective unless otherwise ordered.

List on 06.11.2019 at 3.30 P.M."

2. It was noted by this Court that there is a blatant violation of Article 21 of the Constitution *i.e.*, Right to Life by the serious kind of pollution which is being caused by various factors including stubble burning. The stubble burning in the month of October/November comprises approximately 40% of the pollution, but for the remaining period, stubble burning is not the cause of pollution in Delhi and NCR region. It was noted by this Court that various other factors which were responsible for causing pollution are as under:

1. Construction and demolition activities.
2. Open dumping of waste/ garbage.
3. Unpaved roads/ pits.
4. Road dust.
5. Garbage burning.
6. Traffic congestion.

3. Various hot-spots in Delhi and NCR regions were identified as noted in the report. This Court has noted the problem of farmers in stubble burning as short gap between two crops due to which agriculturists indulge in stubble burning. We have seen the satellite images of Punjab where stubble burning was more as compared to Haryana and Western Uttar Pradesh from the records of the previous years.

4. We have observed that the entire machinery involved in the administration has to be held responsible for such a tortious act. Particularly, in view of the fact that this problem is not new and is continuing since long, and the authorities have not been able to find a solution, every year, hue and cry is raised. The same reflects badly on the administration, its lethargy is writ large by not taking appropriate action timely and preparing a scheme for its prevention.

5. In the circumstances, we have issued directions to the Chief Secretaries of the States of Rajasthan, Haryana, Punjab, and NCT of Delhi. This Court has also issued directions to all the authorities including panchayats and concerned administrative authorities to ensure that stubble burning does not take place. Other directions were also issued to be taken care of by the Environmental Pollution

(Prevention and Control) Authority (EPCA). Considering the precarious situation, we also restrained demolition and construction activities for the time being and directed the Municipal Authorities, Zonal Commissioners and Deputy Zonal Commissioners to take care of the situation.

6. Some learned counsels have pointed out the fallacy of the odd-even scheme also as this was applied to the cars which are contributing to three percent of the pollution and also 28% caused by the vehicular pollution and then approximately 50% cars operate in Delhi even on those days having odd or even numbers. Thus, it was pointed out that it was not the solution. We have called for certain data in this regard also.

7. The matter was taken on 6.11.2019 by this Court. We have heard the Chief Secretaries of various States, including the Attorney General and passed the following order:

“Heard Sh. K. K. Venugopal, learned Attorney General for India, Sh. Tushar Mehta, learned Solicitor General of India, Mr. A.N.S. Nadkarni, learned Additional Solicitor General, Mr. P.S. Narasimha, learned senior counsel.

We have also heard the Chief Secretaries to the States of Punjab, Haryana, Uttar Pradesh and Govt. Of NCT of Delhi in extensive detail, who have appeared today pursuant to our order dated 04.11.2019. We have also heard Mr. Charanpal Singh Bagri, learned counsel appearing for the farmers. We have heard Mr. Bhure Lal as well.

We find that in advance, no serious groundwork was made by the concerned States where the stubble burning is taking place. This Court passed an order on 29.01.2018. The comments and recommendations made by EPCA on the report of the Sub-Committee of the High Level

Task Force on prevention of stubble burning in Punjab, Haryana and Western Uttar Pradesh was considered by this court. This Court directed the High Level Task Force to adhere to the timelines decided upon by itself and to ensure full compliance by all concerned. This Court also directed the Union of India to give publicity to the Report of the High Level Task Force so that the people are aware of the action been taken. Publicity can be given through print and electronic media as well. Thus, in the pious hope that stubble burning and its impact on the environment shall be taken care of, this Court disposed of the application.

The Report of the Sub-Committee of the High Level Task Force on stubble burning in Punjab, Haryana and Western Uttar Pradesh has been placed on record, in which a suggestion was made to offer Rs. 100/- per quintal as incentive and disincentive both.

The Chief Secretary to the States of Punjab has placed on record the action plan for control of burning of the crop in the State of Punjab dated 01.10.2019. However, the same does not contain the proposal to pay Rs. 100/-. The steps taken by the State of Punjab, pursuant to the order passed by this Court on 04.11.2019 have been placed on record by the Chief Secretary, which we take on record, in which a suggestion has been made to offer financial support in the form of operational cost of crop residue management equipment to play a positive role to achieve zero stubble burning. It has been proposed that the amount of Rs. 100/- per quintal would come to Rs. 2000-2500/- per acre. It was also stated that there is a crop of approximately 24 quintals per acre.

Be that as it may, we direct, in the facts and circumstances of the case, to take care of the stubble, which has not been burnt by the small and marginal farmers in the States of Punjab, Haryana, and Western Uttar Pradesh and to provide them financial support, quantified amount at Rs. 100/- per quintal of Non-Basmati Paddy, shall be given to those farmers within seven days from today by the State Governments to those who have not burnt the stubble.

The Central Government has provided the Scheme of Promotion of Agricultural Mechanization in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi for the period of 2018-19 and 2019-20 with a total outlay of Rs.1151.80 Crores for in-situ Crop Residue Management such as Super Straw Management System for Combine Harvesters, Happy Seeders, Hydraulically Reversible MB Plough, Paddy Straw Chopper, Mulcher, Rotary Slasher, Zero Till Seed Drill and Rotavators are promoted with 50% subsidy to the individual farmers and 80% subsidy for establishment of Custom Hiring Centres of these machines. The Central Government has disbursed its 100% share of funds amounting to Rs. 269.38 Crores, Rs. 137.84 crores, Rs. 148.60 Crores and Rs. 28.51 Crores to the States of Punjab, Haryana, Uttar Pradesh and Central Agencies respectively.

It appears from the statements made by the Chief Secretary to the State of Punjab and Mr. Charanpal Singh Bagri, learned counsel appearing for the farmers that most of the farmers burning stubble are of the category of small and marginal farmers in the State of Punjab

and the Cooperative Societies give the machines on hire basis, which cannot be afforded by the small and marginal farmers. We have been assured by the Chief Secretaries to the State of Punjab, Haryana, Uttar Pradesh that they will be dedicating certain machines for the use of small and marginal farmers. Even operational expenses shall be borne by the State Governments for the time being till the methodology/policy is devised to provide proper facilities of machines dedicated to small and marginal farmers in each of the States. Let roadmap be prepared for that purpose as it is this class of farmers who requires a support as it is by way of compulsion and short duration of time between two crops and they cannot afford the machines which are valuable, having high cost and there is so much small gap between two crops that they are forced to burn stubble in the circumstances.

As projected by the Chief Secretary that the Government is not able to provide financial support to these small and marginal farmers, cannot be accepted. Agriculture is the backbone of the economy of this country. Its interest cannot be overlooked and self-created bankruptcy cannot rescue it when the State has the obligation towards the agriculture. The Central Government is providing the money. The State Government has contributed to it. They cannot ignore the interest of the small and marginal farmers. It is the bounden duty of the Central as well as the State Government to ensure the interest of these class of farmers is catered and they have the facilities of farming and harvesting by modern machines. It should not be prerogative of the chosen few, those who have the money, means and power to afford these luxuries. It is absolutely necessary that poor farmers are equally provided with the modern facilities which are necessary to prevent such incidents of stubble burning and the State Governments' selfcreated bankruptcy or paucity of funds cannot be a guise, not to discharge its obligation, as laid by this Court in "Municipal Council, Ratlam Vs. Vardhichand & Ors.", reported in AIR 1980 SC 1622. We have issued the directions to the various States in accordance with the spirit of the aforesaid decisions.

The Central Government has also its role to play in the matter. In spite of releasing the funds, constituting High Level Committee, submitting report to the Court on the basis of which this Court has passed the order on 29.01.2018, nothing happened to prevent the stubble burning and it has increased this year. Stubble burning took place last year also. That was enough to put on guard the machinery of various Governments, but they did not act in the real earnest. That is why, the incident of stubble burning for want of proper policy has taken place in utter disregard to Court's order. Even the suggestions which were made in the Report, which had been considered by this Court in January, 2018 that Rs. 100/- to be provided as incentive, could not be finalised is nothing but the pathetic state of affairs in which we are put as on today. The total apathy is writ large.

The authorities, concerned Committees, the State Governments ought to have acted to discharge their duties. Directive Principles of the State Policy have been left out of the purview of the Courts for the reason that the State Governments should have full freedom to

implement those in the manner it so desires and the Courts may not become the hurdle in implementing the schemes when they have found expression in various schemes. The schemes cannot be permitted to remain dead letter as futility of such schemes is injurious to the very rule of law and can create anarchy. When schemes have been framed, they are to be implemented and we fully agree with the submission raised by the Attorney General for India that for this pathetic state of affairs, officers cannot escape from their responsibility and liability. They have to be held liable for their inaction and for the situation which is being created every year. When we come to the responsibility of the officers, obviously, each and every incumbent manning the State Government also becomes responsible to take steps in the positive direction. To punish farmers is not an ultimate solution. To provide them the basic facilities, amenities and modern equipment is the call of the day, which has not taken place and the benefits which are being given to the cooperative societies are being usurped mostly by the big farmers. Small and marginal farmers are still not able to reap the fruits of these schemes/machines. We are assured by the Chief Secretaries that they will be looking into this aspect and definitely taking action for allocating these machines to small and marginal farmers. Let them consider at present even without charging anything from them. We direct the State Governments to dedicate these machines, modern equipment for the service of small and marginal farmers for the time being even if necessary free of cost. Let concrete steps be taken and action taken report be submitted to this Court within a period of one month from today by the concerned State Governments.

We have been informed by the Chief Secretary of the State of Punjab that they have ordered certain machines to be purchased in the month of July, August and September, 2019. They are receiving the requisite machines everyday. We expected and it was required that steps should have been taken timely for procuring these machines and to make them available before the harvesting season came for the crop. Now we expect the State Governments to procure the machines as early as possible and submit a report in this regard within four weeks from today.

It was suggested by the Attorney General that it would be appropriate to direct the concerned Ministries of the Central Government as well as the State Governments involved in the matter to prepare a comprehensive plan to take care of the situation. It is a welcome suggestion and we accept it. We direct the Ministry of Agriculture, Ministry of Environment and Forests and the States of Punjab, Haryana and Uttar Pradesh and the Government of NCT of Delhi to prepare a comprehensive scheme to take care of environmental issues and all such ancillary issues taking care of providing small and marginal farmers with modern equipment and let such a scheme be prepared not only for these States but for various other States where such facilities are lacking and are required to be provided. For that, modalities may be worked out as per the scheme to be framed by the Central Government in collaboration/ consultation

with the various State Governments. Let it be done within three months from today and the report of the steps to be taken be submitted to this Court.

For the time being, we direct the States of Punjab, Haryana and Uttar Pradesh to disburse the money and they should not wait for or write letters to the Central Government to give certain funds for this purpose. Let it be released forthwith and any noncompliance of the same would be viewed seriously, is made clear to the concerned Chief Secretaries, who are present in this Court.

We will take a final call on the aspect of finance also when we consider the detailed report to be submitted by the State Government and after hearing the other stake holders, including the Central Government.

It has been pointed out by the learned counsel appearing for the farmers that certain petitions are pending. As prayed jointly, CWP No. 23799 of 2017 titled as "Bhartikisan Union Vs. Union of India and Others" and CWP No. 15582 of 2018 titled as "Charanpal Singh Bagri Vs. Union of India & Ors." Filed by the farmers in the High Court of Punjab and Haryana, they are transferred to this Court for being heard along with this matter.

We have heard the Chief Secretary of Delhi also and have pointed out the tables extracted in the order dated 04.11.2019 passed by this Court there are various factors which are contributing to the pollution in Delhi such as construction and demolition, open dumping of waste, garbage, unpaved roads/pit, road dust, garbage burning and traffic congestion. It is apparent from the table extracted in the order dated 4.11.2019 that contribution to large extent is made by the aforesaid factors and stubble burning in the other States has contributed to 40% to 44% only. It is the shocking state of affairs that in the National Capital of Delhi there are unpaved roads/pits. We have not been able to take care of the road dust in spite of spending huge amount every year, open dumping and waste, garbage burning is still taking place. Basically, the Corporation and the Government of NCT of Delhi has failed to prepare a proper scheme in this regard. When the garbage/waste can be managed in Pune and Indore very effectively, why we cannot have a waste management scheme in Delhi, particularly when it is the capital city and face of India. This is reflective of a total apathy of the officers and lack of planning and nonaccountability for the money spent, which is responsible for the situation in which we are put today. It is only the Monitoring Committee which is doing its job effectively, otherwise position would have been much worse. We expect all the authorities to take care of the situation, we request the Monitoring Committee also to look into these aspects and compliance is made. We authorize them to look into these aspects, whether orders of this Court in this regard are being appropriately carried out or not and submit a report to this Court.

It has been assured by the Chief Secretary of the NCT of Delhi that most of the aspects will be taken care of within seven days. They have made a consultation with the IIT Expert on the pressure with which water to be sprinkled on the roads and chemicals to be used so as to

settle the dust. We hope and trust that the statement made by the Chief Secretary is carried out in true letter and spirit and let a compliance report in this regard be filed in this Court, taking the steps not only with respect to these works but various hot spots which have been pointed out with respect to Delhi by the Government of NCT of Delhi, with respect to other places such as Faridabad, Gurugram etc. we direct the concerned Chief Secretary to the States to take care of those hot spots and to submit a compliance report of the needful. With respect to unpaved roads/pits, there should ideally be no pits/potholes as they are cause of various accidents and accidental deaths. There are uncovered chambers also which are left. Unpaved roads have also contributed to the pollution and dust. Let a concrete plan in this regard, notwithstanding colony is legal and has been handed over or not, be prepared and submitted to this Court by the Government of NCT of Delhi in collaboration with and consultation of the various corporations and time frame for that be also stated. In how much time they are going to improve the road conditions. Pits/potholes be taken care of positively within three weeks from today.

8. This Court vide order dated 29.1.2018 has directed the constitution of a High Level Task Force to adhere to the timeline decided and compliance by all concerned. This Court has earlier directed the Union of India to publish the report of the High Level Task Force so that people are being aware of the action being taken. Publicity was to be given in print and electronic media as well. Acting upon the public trust doctrine imposed upon the authorities, this Court has disposed of the application. A report of the Sub-Committee of the High Level Task Force was submitted before this Court in which suggestion was made to give Rs.100/- per quintal of incentive and disincentive both.

9. Pursuant to the order passed by this Court on 4.11.2019, the Chief Secretary of Punjab placed on record a suggestion to offer

financial support in the form of operational cost of Crop Residuary Management Equipment to play a positive role to achieve zero stubble burning. It was proposed that an amount of Rs.100/- per quintal would come to Rs.2000-2500/- per acre as yield is approximately 24 quintal per acre. Considering the aforesaid, we have directed that financial support of Rs.100/- per quintal for Non-Basmati Paddy shall be given to those farmers who have not burnt the stubble as an incentive. For in-situ crop residue, Central Government has provided a scheme of promotion of agricultural mechanization in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi. For the management of straw 50% subsidy has been provided to the individual farmers and 80% for the establishment of Custom Hiring Centres for procuring machines as mentioned in the order.

10. It was pointed out that marginal farmers and poor farmers burn the stubble as they do not have means either to purchase or to hire the machines such as Super Straw Management System for Combine Harvesters, Happy Seeders, Hydraulically Reversible MB Plough, Paddy Straw Chopper, Mulcher, Rotary Slasher, Zero Till Seed Drill and Rotavators, etc. The interest of these classes of farmers has to be looked into by the concerned State Government so that they are able to do harvesting by the modern machines and facilities. This Court has noted that adequate steps have not been taken by the concerned State

Governments and the Committees despite the order passed by this Court. They ought to have discharged their duties. This Court also directed the State Government to dedicate certain machines with modern equipment for the service of small and marginal farmers. A comprehensive plan was ordered to be prepared to take care of the situation. We have directed the Central Government to work in collaboration and consultation with various State Governments to do the needful within three months and to submit a report in this Court.

11. This Court also observed as to why there is no proper system of disposal of garbage and waste management and the proper scheme has not been prepared in this regard by NCT of Delhi. When it can be managed in cities like Pune and Indore effectively, it is disheartening to note that Chief Secretary has ultimately stated that they have an arrangement for only 55% of the garbage and waste and not for the remaining 45% per year. In these circumstances, we have directed the Monitoring Committee to look after these aspects and to submit a report with respect to NCT of Delhi. We have also directed that unpaved roads, potholes should also be taken care of. Potholes are the cause of various accidents and accidental deaths. We have directed that potholes be taken care of within three weeks and for unpaved roads, a comprehensive plan be prepared.

12. This Court thereafter took up the matter on 13.11.2019 and passed the following order :

“RE : SMOG IN DELHI

We have asked the learned counsel appearing for the Union of India as well as the Government of NCT of Delhi to convene a meeting by tomorrow for working out the feasibility of installation of smog towers which take care of the smog within certain range of kilometers, to say 3 to 10 kms and place their concrete proposal before us as it is an urgent matter from the point of view of Delhi.

We direct the Central Pollution Control Board (CPCB) to produce the record of each and every day from 02.11.2019, including that of 11th and 12th November, 2019, which were not odd/even days, till 14.11.2019. The record of the month of October 2019 shall also be produced before this Court. The day-to-day record of the last year, maintained by CPCB, for the same period from 01.10.2018 till 31.12.2018 and January and February 2019 be also placed on record before this Court. Let the requisite affidavit be filed on or before 15.11.2019.

As requested by Mr. Dhruv Mehta, learned senior counsel, let additional documents/affidavit be filed during the course of the day.

Notice be issued in W.P. (C) No. 1333 of 2019 (Item No. 309 - Odd/even case) and be listed along with this matter on 15.11.2019.

A copy of the writ petition be furnished on the standing counsel for the respondent.“

13. This Court directed the Union Government and Government of NCT of Delhi to convene a meeting to consider the feasibility of installation of Smog Towers.

14. On 15.11.2019 following orders was passed by this Court:

“A joint affidavit on behalf of Ministry of Environment, Forest and Climate Change and Central Pollution Control Board has been given in Court today along with some letters one of which was sent to Department of Science and Technology dated 31.10.2019 (Annexure R/3) regarding establishment of towers to remove pollution but a final decision is required to be taken on the said proposal. The above affidavit is taken on record.

As prayed, let a decision in the matter be taken within seven days from today.

With respect to Project Vayu, let the concerned stakeholders

file their response as to how much time will be taken to note the results of the trial and the minimum period required for that. The requisite affidavit be filed within seven days.

We have heard Member Secretary, Central Pollution Control Board (CPCB) and other senior counsels/counsel appearing for the parties. The Member Secretary, CPCB has pointed out that pollution caused due to stubble burning has been reduced to approximately 5%, however, residue remains of the previous stubble burning that is also adding to the pollution.

It was also pointed out that vehicular pollution adds to 28% of the total pollution of Delhi. Out of that 8% is created by trucks, 1% by tractors, 3% by buses, 3% by cars, 7% by two-wheelers, 5% by three-wheelers, 1% by LCVs. He has pointed out that odd-even scheme is applied to the cars only, which contribute only 3% out of 28% of the total pollution caused by the vehicular traffic in Delhi. Mr. Mukul Rohatgi, learned senior counsel has also pointed out that applying odd-even scheme with respect to cars cannot be said to be a wholesome solution. However, in the absence of the effective public transport, two-wheelers and three-wheelers plying has not been stopped.

Another factor which is important for causing environmental pollution in Delhi and NCR region is said to be construction activities. Agricultural burning is adding to 4%, industries 30% and the residential sector in the form of Bio Mass, Kerosene and LPG is adding to 10% in total.

It was also pointed out that there are complaints that some vehicles are plying illegally using kerosene in Delhi/NCR and Delhi Pollution Control Committee (DPCC) has power and authority to check such use in Delhi. The DPCC can do the needful in the matter. We direct DPCC to ensure the random checking is done of three-wheelers as well as vehicles which are being used in Delhi by corporations as well as other such bodies etc. as to what kind of fuel is being used. In NCR region concerned pollution control bodies to do the checking. In case it is found that Kerosene is used not only the concerned driver/owner shall be responsible but the officers of the Department shall also be held responsible for using the kerosene oil. Let random checking be done of as many vehicles as possible and a report be submitted to this Court within seven days, of the checking done in this regard.

It was also pointed out by the Member Secretary, CPCB that there are 13 hot spots which have been identified in Delhi and there were several other spots in NCR which were also pointed out in the order dated 06.11.2019. Some steps have been taken to take care of those hot spots but lot of steps remain to be done. Let the effective steps be taken so as to remove the pollutants from the hot spots as ordered by this Court. Hot spots be cleared of the pollutants within a week, which is a reasonable period as stated by the Member Secretary, CPCB and compliance affidavit be filed.

We have asked Mr. Mukul Rohatgi, learned senior counsel appearing on behalf of the NCT of Delhi, to find out what effective

steps can be taken to curb the pollution in Delhi and NCR Region, considering the onset of winter and fog conditions which are going to cause serious problem.

We have seen that in spite of imposition of odd-even scheme the pollution is increasing in the city of Delhi and the NCR region and pollution has reached to very severe level. Drastic steps are required to be taken by all concerned working in tandem and to cooperate with each other as it is not an adversarial litigation. Let the concerned authorities discharge their duties in view of Doctrine of Public Trust and rise to the occasion to take care of the pollution which is being caused. Let the effective steps be suggested to this Court, as assured, on 25.11.2019.

It was also pointed out that in Haryana, Punjab and Uttar Pradesh stubble burning is still taking place. Satellite images have been placed on record by Ms. Aprajita Singh, learned Amicus Curiae, Mr. A.N.S. Nadkarni, learned Additional Solicitor General of India and Mr. Mukul Rohatgi, learned senior counsel. In the circumstances, in order to ensure that necessary steps are taken and no stubble burning takes place, the presence of the Chief Secretary of the State of Punjab, Haryana and Uttar Pradesh and the NCT of Delhi is required as lot is required to be done and the pollution level is worsening in Delhi and NCR region, in spite of orders. We direct the Chief Secretary of the above mentioned States/NCT of Delhi to file their respective affidavits of the steps taken and to remain present in this Court on 25.11.2019.

We are not dilating further on the odd-even scheme issue as it was stated by Mr. Mukul Rohatgi, learned senior counsel, that as to odd-even scheme today is the last day. Be that as it may, let further data has to be placed by CPCB as well as the Government of NCT of Delhi in this regard.

The Delhi Development Authority (DDA), PWD/CPWD and all the Corporations of Delhi cooperate and extend full support to the Monitoring Committee, any non-compliance to be viewed seriously by this Court.

List on 25.11.2019.“

15. It was pointed out by Shri Mukul Rohatgi, learned senior counsel appearing on behalf of Government of NCT of Delhi that by applying odd-even scheme with respect to cars alone cannot be said to be a wholesome solution. In the absence of effective public transport, two-wheelers and three-wheelers plying have not been stopped.

16. As a matter of fact, in our opinion, it is absolutely necessary to have an effective public transport system in order to ensure that plying of private vehicles is minimized. Until and unless the Government fulfills its obligation to provide an effective public transport system, private vehicles are bound to be plied and adding to the problem.

17. It was pointed out that 28% of the total pollution is caused by vehicular traffic. Though pollution by stubble burning was reduced to 5%, one of the major factors for pollution is construction and demolition activities. Agriculture burning is adding to 4%, and industries are causing 30%, residential sector in the form of Bio Mass, Kerosene and LPG are adding to 10% in total.

18. This Court also took note of the submission that certain vehicles were found plying on Kerosene. This Court has issued appropriate directions in this regard also. Thirteen hot-spots were identified in Delhi and various other spots in NCR. We have issued directions in this regard also. However, at present status report is required to be filed by Delhi and NCR region with respect to these hot-spots, which have been identified and noted in the orders mentioned above.

19. It was also pointed out to this Court that in winter fog conditions are going to cause further deterioration of the Air Quality Index (AQI). This Court thereafter directed the matter to be listed on 25.11.2019.

Following order was passed:

"1. Heard the learned counsel for the parties and the Chief Secretaries to the States of Punjab, Haryana, Uttar Pradesh and Govt. of NCT of Delhi at length. We find from the Affidavit placed by Mr. A. N. S. Nadkarni, learned ASG, that the fire count as on 07.11.2019 has increased thereafter in the States of Punjab and Haryana and Uttar Pradesh on some of the days. The situation is alarming and indicates that the order has not been complied with and for that not only the State machinery is responsible, but the farmers are also responsible. Considering the aforesaid aspects and also the Air Quality Index, it has become necessary to take care of the situation, otherwise such incidents are not going to stop in future.

2. We are informed by the Chief Secretary to the Govt. of NCT of Delhi also that they have arrangements to clean annually the garbage and waste to the extent of 55% only and the remaining 45% cannot be cleaned in spite of best efforts considering the annual capacity to clean the garbage/waste. We have suo moto taken note of the water pollution in Delhi and other places as it appears that there are reports that impure water is being supplied to the people and there are reports to the contrary that samples have been manipulated. We cannot leave the matter at that. As a matter of fact, in such a matter of air and water pollution, it is the Constitutional duty enjoined upon all the stakeholders to do the needful for providing better air and potable water. It was also stated by the Chief Secretary to the Govt. of Delhi that there are certain problems of governance. The problem of governance, if any, cannot come in the way to deal with such matters. It is expected from the Government machineries not to enter into the rival claims, but to sit down together, work it out how to improve the air quality and whether potable water is being supplied or not, and how to improve the water management.

3. We are also apprised by the Chief Secretary to the State of Uttar Pradesh that they are mainly focusing on eight districts, as with regard to those districts this Court has passed the order. He has also reported to us that stubble burning incidents, which have been increased, are in the Eastern region. It may not affect Delhi and NCR Region. As a matter of fact, such approach is not understandable that the State has to take care of only those areas for which this Court has issued the directions. We take judicial notice of the fact that there are six other cities in the country which are reportedly more polluted in air quality index than Delhi, out of which three are stated to be in Uttar Pradesh only. Hence, we propose to issue notice to all the States to report to us what is the Air Quality Index in the various towns. How they are discharging their obligations with respect to lifting of the garbage, waste etc. and by and large, we can take judicial notice of the fact that similar is the situation in virtually several cities in various States. The Corporations are not having even the basic arrangements for lifting the garbage, which is being generated everyday. It appears to be a case of

lost priorities. Be that as it may, there are certain cities which are managing the garbage effectively and efficiently in India, which indicates that it can be done in effective way but there is lack of proper planning in that regard.

4. We see Yamuna river virtually turned into a sullage. We take judicial notice of this situation. Similar is the position with Ganges. As it proceeds, industrial effluents are being poured in rivers. Sewage is also being directly put in rivers contributing to the river water pollution. We direct the Pollution Control Boards of the various States as well as the Central Pollution Control Board and various Governments to place before us the data and material with respect to various rivers in the concerned States, and what steps they are taking to curb the pollution in such rivers and to management as to industrial effluents, sewage, garbage, waste and air pollution, including the water management. We club the ending case of water management with this matter.

5. It was stated by the Chief Secretary to the State of Punjab that there are few machines by which stubble can be collected called the bailors but those machines are concentrated in few districts only. He has assured us of the fact that such bailors to be provided in different districts at block levels so that small farmers can use these machines for removal of the stubble. We direct the States of Haryana and Uttar Pradesh also to do the needful in this regard. We also issue notice to various other States as stubble burning is taking place in various other States also to submit a report as to the stubble burning in their States and what steps they are taking and what they propose to do in this regard.

6. With respect to Smog Towers, let a concrete decision be taken within 10 days from today what kind of towers are required which may operate successfully and how many such towers are required so as to take care of the pollution which is being caused in Delhi and NCR region. The decision be taken not only by the Government of Delhi, but also by the States of Punjab, Haryana and Uttar Pradesh, where the position is reported to have deteriorated.

7. We are informed that Anti Smog Guns were experimented by the Government of NCT of Delhi which is used as a cannon that sprays atomized water 50 metres into the air to bring down suspended pollutants. The device is connected to a water tank and it can be taken to different parts of the city on a vehicle. We require the Government of NCT of Delhi to report to us what steps they have taken in this regard to use and acquire these Anti Smog Guns and the outcome of the experiment which was performed. Let Central Pollution Control Board (CPCB) also ascertain and submit a report regarding the effect created by the use of such guns within 10 days.

8. There are other technologies which are being used to control the

pollution. Oxy Furnaces are being developed to reduce the Ozone Emissions from industries. Technology of i) Wireless Sensors; ii) Nanotechnology; iii) Laser methods; (iv) Spectroscopic monitoring techniques and (v) Chemical methods are also used so as to control the pollution.

9. We require an IIT expert to be associated by the CPCB and High Level Committee to be formed by the Central Government including that of the stakeholders of the Government of NCT of Delhi to work out on the aforesaid various technologies and how they can be utilised and their feasibility etc. Let the Committee be constituted within three days from today and report be filed within three weeks in this regard with respect to above-mentioned technologies.

10. As we have noted that from last several years, the position of air pollution is worsening in spite of various orders passed by this Court. The reports and the scientific data indicating that large section of people are suffering from the dreaded diseases due to such air pollution such as Cancer, Asthma and various other diseases. Life span is adversely affected. Time has come that the various States recognise right to life is important right. Human life and health have been put in danger. In such scenario, why they should not be required to pay compensation to such persons who are being affected by inadequate arrangement to check the air pollution, non-lifting of garbage, waste which add ultimately to the pollution.

11. In this case we find that Delhi is lacking the capacity to the extent of 45% to even clean the garbage/waste which is being generated. Similar is the situation in various other places. We take note of the situation which is alarming and time has come to remind the State machineries as to their duties as all of us are meant to serve the people of this great country. Our Constitution has envisaged certain Directive Principles as they are more important rights at the discretion of the Government. The Courts are not to interfere in that, but dereliction cannot be to the extent that the very right to life is endangered by the inaction.

12. We find that the State has to take care of the health and strength of workers, men and women. Children are given opportunities and facilities to develop in a healthy manner. The State is duty bound under Article 41 also to take care of old age, sickness and disablement etc. The State is also under obligation under Article 47 to raise the level of nutrition and the standard of living and to improve the public health. Under Article 48, the State is duty bound to endeavour to organise agriculture and animal husbandry with modern and scientific lines. Article 48A deals with protection and safeguarding of forests and wild life. Article 51A(g) confers duty on individuals to protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures. Article 51A(h) requires to develop scientific temper, humanism and the spirit of

inquiry and reform.

13. Not only the basic Fundamental Rights are being ignored with respect to air and water, problem of governance are being projected, which cannot come into the way of the basic Fundamental Rights which a human enjoys, much less to talk of the Fundamental Duties and Directive Principles contained in the State policy which have already found statutory expression in the form of Municipal laws, Prevention of Air Pollution and Water Acts and various schemes framed by the Central Government and State Governments, but we see neither the air quality has improved nor the water quality in several States, not to talk of Delhi only. We have called for the report from Delhi Government where the reports indicate that the contaminated water is being supplied and also from Bureau of Indian Standards to submit report in this regard.

14. In the aforesaid situation, we have to direct the various State Governments to submit a report not only as to the air quality but also as to the quality of water which is being supplied, and water management system.

15. At the same time, as we find that in spite of various orders passed by this Court, we are not able to improve the situation of air quality which we can see at least in Delhi and NCR with certainty. Time has come to require the State Governments to explain why they should not be asked to compensate the persons who are being affected by bad air quality. Obviously, the State is run by the administration, why liability should not be imposed for such a tort on the concerned machinery also of the various States which are failing to discharge their basic duties. This Court in *Municipal Council, Ratlam Vs. Vardhichand & Ors.*, reported in (1980) 4 SCC 162 has held they have to take proper and positive action in this direction. It is their bounden duty to provide civic amenities, and also to see that self-created bankruptcy does not come in the discharge of the statutory obligation which are necessary for existence of human life. We have seen during the course of the arguments that one State is passing the burden upon the Centre and then it is stated on behalf of the Central Government that they have framed scheme and it for the State Governments to implement it. We expect not only the 'policy making' but also its 'implementation'. Let the States of Punjab, Haryana, Uttar Pradesh and the Government of NCT of Delhi respond, due to the air pollution, why the concerned Government and its concerned machinery, from top to bottom, should not be asked to compensate the citizens of Delhi and adjoining areas for various diseases which are being caused and sufferings and troubles which are being faced and the report indicates the life span is being shortened. Let show cause notice be issued to the various State Governments, and to the Chief Secretaries, to submit reply within six weeks. Let the matter be listed for consideration on 17.01.2020. The Chief Secretaries to the States of Punjab, Haryana, Uttar Pradesh and Government of NCT of Delhi be personally present on that date.

16. Besides that, we also issue notice to the learned counsel appearing on behalf of the farmers as to show cause why the orders of this Court have been violated and why the farmers should not be asked to pay the compensation which may be determined by this Court and why the burden should not be fastened upon them also.

17. Let the decision be taken with respect to other technologies mentioned in Paragraph No. 8 above as also the decision to be take on the smog guns and smoke towers within 10 days from today. List the case for consideration of above aspects on 09.12.2019. "

20. This Court was again apprised of that stubble burning had increased after 7.11.2019 in the State of Punjab and Haryana and Uttar Pradesh on some of the days.

21. Regarding water pollution in Delhi and other places, considering the reports that impure water was being supplied to the people, which was not potable, we have directed the concerned authorities to sit together for improving the quality of the water and methods to improve water management.

22. It was pointed out that apart from Delhi, there were six more polluted cities in terms of AQI than Delhi. We have issued notice to all the States to improve the quality of Air and what steps the corporation and other municipal bodies were having for the effective disposal of garbage. As to the pollution of rivers, this Court has directed to place the data as to what steps are being taken by various State Governments to curb the pollution in the rivers as more than 300 rivers are reported to be polluted by way of industrial effluent, sewage,

etc.

23. The Chief Secretary of State of Punjab also pointed out that stubble can be collected by the machines called balors. They were concentrated only in a few districts. We were assured that they would be distributed in different districts and block-level where small farmers can use these machines for removal of the stubble.

24. We have directed that with respect to Smog Towers, a decision be taken not only by the Government of NCT of Delhi but by all concerned stakeholders *i.e.*, Punjab, Haryana, Uttar Pradesh, etc. With respect to Anti Smog Guns also, we have directed how they can be used to minimise pollution be reported to this Court. Besides, the Court has directed that the use of new technology be considered like:

1. Oxy furnaces to reduce the ozone emission from the industries.
2. Wireless Censors
3. Use of Nano Technology
4. Laser methods
5. Spectroscopic Monitoring Techniques

25. Chemical methods are also useful for controlling pollution. We have directed that appropriate Committee to be formed and decision be taken and informed to this Court. We have also noted that air pollution is worsening and a large number of people suffer as a side

effect by various diseases such as cancer, asthma, etc. The life span is also adversely affected. We have also required to show cause as to why the State machinery should not be held responsible for compensating the people for making inadequate arrangements to check air pollution, having no arrangement for the lifting of the garbage and waste, which ultimately also adds to the pollution. We have noted the constitutional statutory obligation of the Government and the various other bodies, State Governments and various Municipal Bodies in the above-mentioned order. We have also called the report as to water pollution from Delhi Government as well as the Bureau of Indian Standards. We have also directed the States of Punjab, Haryana, Uttar Pradesh and Government of NCT of Delhi to respond as to why the concerned Government and machinery should not be asked to compensate the person for the various sufferings and trouble faced by them and violation of their right under Article 21 of the Constitution. For that, the matter has been listed on 20.01.2020.

26. Thereafter the matter was taken on 9.12.2019 and the following order was passed :

"It is submitted by Mr. A.N.S. Nadkarni, learned ASG, that the Central Government had referred the matter to the Committee formed by the Central Government regarding Smog Guns and Smoke Towers and other technologies, as mentioned in Serial Nos. 6, 7 & 8 of the order dated 25.11.2019.

Let the Chief Secretaries, Department of Environment, Government of NCT of Delhi and the States of Punjab, Haryana and Uttar Pradesh be also made the Members of the Committee formed by the Central Government.

Let the report of the Committee be filed with respect to the aspects mentioned in Paragraphs 6, 7 & 8 of order dated 25.11.2019, by 11.12.2019.

Let the States of Punjab, Haryana and Uttar Pradesh also respond about the stubble burning matter on or before 11.12.2019.

List the matter for consideration on 16.12.2019.

As mentioned by Mr. Ranjit Kumar, learned senior counsel, Report Nos. 1 and 2 be also placed for consideration on 16.12.2019.

IA NOS. 177602 AND 177610/2019

In the affidavit dated 05.12.2019, the Central Pollution Control Board (CPCB) has stated as under :-

"12. That it is respectfully submitted that it is normally experienced that in month of December depending upon climatic condition the AQI category varies. As a matter of fact, last year (2018) 8 days in the month of December were in severe AQI category. Presently the situation not being severe, CPCB is of considered opinion that partial ban could be in place for construction activities in as much as no construction should be permitted during night time (6.00 pm to 6.00 am). The ban imposed could be partially lifted by permitting activities during day time (6.00 am to 6.00 pm), subject to the criteria stipulated in GRAP, wherein strict enforcement of rules for dust control in construction activities and closure of non-compliant sites is mandated in moderate to poor AQI category and further a bank on construction activities may be imposed by EPCA if Ambient AIR quality levels persist in severe+/emergency category for 48 hours or more."

Hence, the ban is relaxed in terms of the recommendations made by the Central Pollution Control Board (CPCB), as quoted above. However, conditions for raising construction be scrupulously followed.

The applications are disposed of."

27. An affidavit has been filed by respondent No.1, *i.e.*, Ministry of Environment Forest and Climatic Change, wherein it has been pointed out that Ministry has constituted a High-Level Committee on 27.11.2019 to submit a report regarding the various technologies which can be utilized. A Committee has been constituted with the following:

- " a. Member Secretary, CPCB-Chairman
- b. Director, NEERI-Member

- c. Member Secretary, DPCC-Member
- d. Head of Technology Missions Division, DST-Member
- e. Professor Mukesh Khare, Civil Engineering Department, IIT Delhi – Member
- f. Professor Mukesh Sharma, Civil Engineering Department, IIT Kanpur – Member
- g. Head of Air Quality Division, CPCB – Member"

28. As soon as the report is received, the Ministry shall deliberate upon the report of the Committee and submit it to the Court.

29. A Status Report in the form of an affidavit has also been filed on 16.12.2019 by the Ministry of Environment, Forest and Climatic Change. Following issues were considered:

- a) Smog Towers
- b) Anti-Smog Guns
- c) Oxy-Furnace
- d) Nanotechnology
- e) Chemical Methods
- f) Monitoring Technologies
 - i. Wireless Sensor Networks
 - ii. Laser Methods
 - iii. Spectroscopic Monitoring Techniques

30. Following proposal was considered:

Smog Towers:

"A proposal by IIT-Bombay and IIT-Delhi in association with University of Minnesota proposed large scale air cleaning system with down-draft approach for reducing pollution concentration level. The technology aims to provide down draft for the air flow through electricity run fans and filter bank for passage of polluted air. The technology sucks air from top of the tower and provide a downdraft flow through high efficiency filter at 3-4 m height from the ground. The flow is induced by 40 fans. The land area coverage is 20m x 20m for tower base surrounded by 10m x 10m for shrouded and safety area, thus total of 30m x 30m with approx. height of 20m The tower will be

made of 6m x 6m rectangular stainless frame enforced concrete structure and 40 fans will be pushing air through 4 m high filtration systems covering the four sides with a total airflow rate of 960 m³/sec. Effective Clean Air Delivery Rate (CADR) of is 75 million m³/ day. It was reported that on an average of 65% of reduction can be achieved up to 700 m and it is expected to influence more than 1 km in the downwind direction. At the same time the radius of influence is around 400 m in all other directions.

31. A decision has been taken to start a pilot project as suggested by the Indian Institute of Technology, Delhi and Indian Institute of Technology, Bombay and Expert Panel of Department of Science and Technology and the Delhi Government to take up the Pilot Project at Connaught Place. It has also been pointed out that the Ministry is in favor of adopting new technologies also, which helps in mitigating air pollution and cut at the root. The Ministry has, thus, for the time being, decided to establish one or two demonstration towers in the area of localized residents of the high pollution level. After the efficiency of these demonstration towers, the Ministry will consider installing multiple towers.

In re: Anti Smog Guns

32. With respect to Anti-Smog Guns following observations have been made:

"Based on the findings of CPCB-DPCC study, it may be inferred that

anti-smog gun may be effective in controlling localized (50-70m) dust during the period of application and more suitable to high dust emission zones such as large construction sites."

In re: Oxy Furnace

33. With respect to Oxy Furnace observations of the High-Level Committee is as under:

"While there have been instances to suggest the usage of oxy-fuel furnaces in glass industries, only research project/ pilot studies have been run for other industries. Test runs have been conducted to assess the feasibility of oxy furnaces in power plants, however, no instance of any large scale run has been found.

It is suggested that in order to understand sector specific applicability of oxy furnace for a given size and area, a detailed feasibility study involving sector specific experts and stakeholders may be conducted by Department of Science & Technology in association with the concerned ministry.

It is noteworthy to mention that in urban centers, most of the Nox is released from vehicles. Thus, there may not be a considerable reduction in ambient air levels of Ozone with the implementation of oxy furnaces. Also there are Nox emission standards specified for these sectors."

In re: Nano Technology

34. With respect to Nano Technology, it has been pointed out that the use of nanotechnology is on the research and development stage.

Following observations has been made:

"Use of photocatalytic paints for passive air cleaning is at research and development phase and implementation of passive photocatalytic cleaning of outdoor air will require both small and large demonstration projects.

Better understanding of parameters controlling release of nanoparticles from nanomaterials is required in order to formulate safer paints i.e. less nanoparticles and VOCs releasing paints with the same photocatalytic efficiency.

It is recommended that a pilot study led by Department of Science & Technology in association with concerned Ministry, IISC, IIT Kanpur and paint manufacturers may be taken to study the effectiveness of paints using nanomaterials for cleaning ambient air including monitoring of release of other undesirable compounds."

In re: Chemical methods

35. With respect to Chemical Methods, the Committee has made the following observations:

"Chemical methods are well-established methods for pollution control in specific industrial sectors.

Use of dust suppressants at sites requiring dust control such as construction & demolition sites and unpaved road have already been suggested to agencies in Delhi NCR."

36. With respect to monitoring technology such as Wireless Sensor Methods, Laser Methods and Spectroscopic Monitoring Techniques observations of the High-Level Committee are produced hereunder:

"Wireless Sensor Network technology is still in developmental stage and IIT and NEERI are evaluating performance in terms of its accuracy, precision by collocation study against conventional real-time instruments. The smart city air quality monitoring has included WSN as community monitoring network. However, WSN may be used as an indicative monitoring tool for few activities like mining, large construction sites, having emission potential to supplement air quality data and report to regulator for conducting further investigation before taking actions.

The laser light scattering based ambient particulate monitoring has challenges as large spatio-temporal variability in India and the sensitivity of this technique to different particle characteristic & varied whether condition among and within season leads to more difficulties in adopting this principle in regulatory monitoring in India, however certified instruments based on this technique may be considered in future.

Regarding LiDAR, this technology may be adopted for vertical monitoring at few places to track transport of pollutants at higher altitude and for optimization of air quality forecasting.

Spectroscopy methods are being extensively used in air quality monitoring (both source and ambient air) in CAAQM and CEMS. New methods having specific applications are being incorporated in various technical guidelines after periodic review."

37. An affidavit has been filed on behalf of the Government of NCT of Delhi, pointing out the observations of the High-Level Committee. They have mentioned about a pilot project with respect to the installation of Anti-Smog Towers. It has been pointed out that they have decided to set up a tower at Connaught Place. It has been proposed that the pilot project will be completed by September 2020. With respect to Anti-Smog Guns following observations have been made during the experiment/ testing.

"That, Anti-Smog Gun demonstrated on 02.12.2019 is a type of conical cannon that sprays atomized water with thrust up-to 70 meters with 360 degrees of rotation of the cannon. The cannon/ gun was also equipped to spray atomised water from horizontal range (0 degree) upto 60 degrees. The device was connected to a water tanker and mounted on a truck trolley to provide mobility. In order to achieve objectivity during the experiment, the ambient air quality parameters around the area of experiment before, during the experiment at different points of time and after the experiment were recorded. The following were observed during the experiment:

- i. The ambient air quality (PM 2.5) recorded was 20% to 30% less than the pre & post experiment hours. The PM 10 also came down by the same margin of 20% to 30% during the duration of experiment and the effect continued till one hour after the spraying was stopped.
- ii. During the experiment, the atomized water droplets travelled upto 70 meters approximately and there was no substantial wetting of the ground on which it can be concluded that there is optimization of use of water and there was very high probability of contact between the atomized water droplets and the particulate matter and resultant cleansing effect.
- iii. Though there was measurable impact on the ambient air quality during the experiment, the same may have been contributed by other influencing factors and may not be limited only to the use of Anti Smog Gun.
- iv. It was concluded by the observing team that Anti-Smog Gun has the potential to reduce the particulate matter load added into air by the

local sources in following activities:

- Large construction sites
 - Road construction stretches particularly during earthwork and compacting
 - Mining activities
 - Large parking sites on unpaved areas during large public gatherings.
 - Demolition activities
 - Sprinkling on dust prone traffic corridors.
- v. It is further recommended by the observing team that use of such Anti Smog Gun may also be considered on the roof of high-rise buildings to measure its effectiveness in trapping particulate matter during bad air quality days."

38. It has been pointed out that on the basis of the aforesaid experiment dated 2.12.2019 directions have been given to all construction agencies engaged in activities over large construction site in Delhi to use Anti Smog Guns so that dust is not emanated during activities such as earthwork, compaction, concreting, loading and unloading of raw material, road construction, and demolition activities, etc.

In re: Affidavit by the State of Punjab:

39. An affidavit has been filed on behalf of the State of Punjab. It has been pointed out that the Special Monitoring Cell has been constituted. The action taken report dated 7.12.2019 has been filed. It reads as under:

S No.	Action	Upto 7.12.2019
1.	Total Number of Fire incidents reported by Punjab Remote Sensing Centre	52525
2.	Total Number of site visited by the Sub-	52287

	Divisional Teams	
3.	Total Number of sites at which no crop residue burning observed	26347
4.	Cases in which Environmental Compensation imposed (Amount)	23308 (Rs.6.10 Cr.)
5.	Red entries made in the revenue record	23298
6.	Criminal complaints filed u/s 39 of Air (Prevention and Control of Pollution) Act, 1981.	279
7.	FIRs lodged u/s 188 of IPC	1737
8.	Total Number of cases of imposition of Environmental Compensation on harvest combines	84

40. It is further pointed out that for providing financial assistance an amount of Rs.100/- per quintal for non-basmati paddy, the Department of Agriculture and Farmers Welfare has framed a scheme for making a payment to small and marginal farmers who do not burn the stubble. A total of 240307 applications were received, out of them 29725 applications were rejected. 38697 applications were verified, whereas 171885 applications are under process of verification.

41. It has also been pointed out by the State of Punjab in their affidavit that the supply of total machine as per order dated 6.11.2019 is 21,302. The Department of Agriculture and Farmers Welfare has fixed a nominal rental rate at which machinery would be provided to small and marginal farmers by the Custom Hiring Centres and Cooperative Societies.

42. A comprehensive plan has also been prepared in collaboration with the Ministry of Agriculture, Ministry of Environment and Forests, Government of India, the States of Haryana and Uttar Pradesh and the Government of NCT of Delhi to find all possible solutions like in-situ, ex-situ, diversification from paddy to other crops as well as increased use of paddy straw in power generation and other allied industries. Approximately 200 balers have been provided in the State under various schemes (SMAM RKVY In-situ SMAM) in compliance of the order dated 25.11.2019. Since balers and rake were not included in the in-situ CRM Scheme, they have been included in the SMAM scheme for 2019-20 under Center-State Share Pattern on priority. District-wise detail of application under process for subsidy distribution has also been filed.

43. Six continuous Air Quality Monitoring Stations have been set up in the State of Punjab at Amritsar, Jalandhar, Ludhiana, Mandi, Gobindgarh, Patiala and Khanna. The Department of Science and Technology and Environment, Government of Punjab, has prepared and submitted an action plan for nine non-attainment cities, namely Dera Bassi, Naya Nangal, Patiala, Amritsar, Khanna, Ludhiana, Jalandhar, Dera Baba Nanak and Mandi Govindgarh. Air quality levels of Amritsar, Jalandhar, Ludhiana, Mandi, Gobindgarh, Patiala and Khanna be placed and in case they are not up to the mark, what

steps are being taken. With respect to nine non-complying districts as mentioned in para 13 of the affidavit, what is the action plan and its time limit be indicated.

44. Let the Government of Punjab place before us with respect to steps taken and scheme and on what nominal rates machinery will be provided to marginal and small farmers in Custom Hiring Centres. Let a road map in this regard be prepared and placed before us in this Court. Let a comprehensive scheme be placed in this Court as directed to take care of the situation and the date from which balers have been made available, as pointed out in Annexure (D).

In re: Affidavit by State of Haryana

45. On behalf of the State of Haryana, it has been pointed out that it has identified 4128 eligible small and marginal farmers and distributed the amount of Rs.16,342,327.50/- to 3930 farmers after verification that they did not burn the stubble. After the order dated 6.11.2019, the Government of Haryana took proactive steps by providing enough machines to small and marginal farmers and also providing Rs.1,000/- per acre as 'Operational Costs.' Support is provided not only to non-basmati growers but also to Muchhal variety of basmati growers in the State of Haryana. For not controlling the stubble burning, 23 Officers were charge-sheeted, 7 Officers were suspended and 499 show-cause

notices were issued to Village Level Nodal Officers and the total number of FIR registered were 2020. The State of Haryana had deployed 24414 machines out of which 8773 are owned by individuals, 15641 are with 2831 Custom Hiring Centres (CHCs). During the year 2019-20 Government had established 1637 CHCs against 1300 earlier year.

46. The State of Haryana took the initiative to rope in Gram Panchayats for the establishment of CHCs. They are available free of cost to small and marginal farmers.

47. We direct in this regard that let a requisite percentage of machines be dedicated and reserved for small and marginal farmers.

48. With respect to Straw Balers Unit following data has been filed:

Sr. No.	Straw Baler Units	Numbers
1	Established upto 05.11.2019 i.e. before the orders of Hon'ble Supreme Court	64
2	Established since 06.11.2019 to 11.12.2019	131
3	Purchase/ establishment under process (The State Government had already issued permits to the farmers for the purchase)	155

49. Progress with respect to Straw balers is required to be reported to this Court.

In re: Affidavit by State of Uttar Pradesh

50. An affidavit has been filed on behalf of the State of Uttar Pradesh, wherein it has been pointed out that with respect to stubble burning, various incidents were reported between 1st October to 30th November 2019. Following actions have been reported:

- i. "Departmental action against 599 Lekhpals.
- ii. Warning has been issued to 24 Sub-Divisional Magistrates and Tehsildars.
- iii. Adverse entry given to one Deputy Director of Agriculture.
- iv. Notice issued against Gram Pradhans under 95(1)(G) of PR Act.
- v. Adverse entries given to 19 Class II officers.
- vi. Department proceedings started against 526 officers and employees.
- vii. FIR registered against 1867 farmers.
- viii. Fine imposed against 2186 Farmers or. Rs.237.23 lakhs and 66.03 lakhs recovered till date for flouting this Hon'ble Supreme Court orders.
- ix. Department has distributed 10568 Crops Residue Management implements to farmers, Custom Hiring Centres and Farm Machinery Banks. Farmers can hire implements from Custom Hiring Centres and Farm Machinery Banks.
- x. The Government of India has developed a CHC app from where a farmer can get information about Custom Hiring Centres nearest to him.
- xi. 480 Sugarcane Societies and Cooperative Societies are also being provided with 2400 implements for hiring by farmers.
- xii. Department is also making budgetary provisions to provide in-situ management implements to the tune of Rs.3 lakhs to all

59073 village Panchayats of the State in the next two years, so that Crop Residue Management implements are available nearest to the farmers.

- xiii. 5 implements each are being kept at the 200 Mandies of the State also,
- xiv. These measures will help in the easy availability of implements to farmers.
- xv. Due to interdepartmental coordination, 5 lakh kg/ day of stubble may be used in gaushalas for feeding of animals.
- xvi. For ex-situ management of crop residue, the Chief Secretary has already held a meeting with Oil Companies. They are preparing a plan for crop residue being used as biofuels. They are inviting expression of interest in the month of January for the establishment of biofuel plants based on crop residue in those districts where major burning took place.
- xvii. All District Magistrates and Superintendent Police have been ordered by the State Government to be on vigil and take appropriate action to stop crop residue burning.

51. It has been pointed out in substance that actions have been taken against various incumbents. Crop Residue Management implements have been distributed to farmers, Custom Hiring Centres and Farm Machinery Banks, where farmers can hire implements from them.

52. Direction to be issued to provide implements to small and

marginal farmers free of cost or on concessional basis and to reserve certain equipment exclusively for them.

53. The stubble is also being used in Goshalas for feeding animals and for exclusive management of crop residue, meetings have been conducted with the oil companies to use crop residue as biofuel. Let the State of Uttar Pradesh place on record the deliberations. The States of Punjab, Haryana and Rajasthan are also directed to consider the same, including use of the stubble in goshalas for feeding animals.

54. In the Report No.106 filed by the Environment Pollution (Prevention and Control) Authority (EPCA), it has been pointed that massive amount of plastic, rubber and other industrial waste has been burnt in the open, which is one of the causes of pollution. In Bawana, Mundaka and Tikri, EPCA first worked with the Delhi Pollution Control Committee (DPCC) to issue necessary direction for closure, but directions were not sufficient and the problem of disposal of waste continues.

55. Later on, MOU's have been entered into between the Industries and the Delhi MSW Solutions Limited for sending the waste for incineration. As a result of which 80,000 tonnes of plastic and other waste have been sent for incineration. Around 8,000 tonnes of plastic and other waste have been removed from the Shahdara drain,

however, it is the tip of an iceberg. The problem still remains the same. In Delhi and NCR, waste is piled up and then burnt. Thus, it requires urgent remedial action.

In re: Report No.106 by EPCA

56. In view of the report No.106 of EPCA, following aspects have to be looked into:

- (A) There has to be an identification of dumped waste of plastic, industrial or other waste. The waste should not be burnt and removed for processing/incineration.
- (B) With respect to emitting Black smoke from chimneys, it be ensured that industries are complying with the norms and standards for PM, NO_x, SO_x. We direct Pollution Control Boards of Delhi, Haryana, Rajasthan and Uttar Pradesh to rigorously monitor the industrial areas especially at night and take stringent action against the industry found non-complying with the emission norms or chimneys with visible smoke.
- (C) With respect to dust from the construction site and proper management/ disposal of demolition and construction waste, the Construction and Demolition Waste Management Rules, 2016 have been framed. A check-list for dust control at the construction side be issued. The appropriate penal action has to be taken in accordance with law against the developers flouting the norms. The Government and various municipal

bodies of NCT of Delhi, Rajasthan, Haryana and Uttar Pradesh have to take action and impose penalty on the offenders repeating the offenses and take action against the developers and developers have to be blacklisted for flouting the Construction and Demolition Waste Management Rules and guidelines framed thereunder.

(D) With respect to road construction projects, let there be a sprinkling of water. The Government of NCT of Delhi, Rajasthan, Haryana and Uttar Pradesh have to ensure compliance of the road construction norms.

(E) The recycling of construction and demolition waste is presently in operation and their existing and deficit requirement be also met by the Government of NCT of Delhi, Haryana, Uttar Pradesh and Rajasthan.

(F) With respect to waste burning compliance of Solid Waste Management Rules, 2016 is necessary. The waste segregation and management is required, what are the existing facilities and deficit requirements have to be met by the Government of NCT of Delhi, Haryana, Uttar Pradesh, Rajasthan and Punjab.

(G) In the report, action taken in 2010 to 2019 to combat air pollution has been pointed out:

Table 1: Action taken this decade (2010-2019) to combat air pollution in Delhi

Sector-wise measures implemented	Actions taken
Industry	Approved fuel list notified. In Delhi this notification bans use of all dirty fuels, including coal. In NCR states, pet coke, furnace oil is banned.

	Introduction of Nox and Sox standards in industries so that either they install pollution equipment or move to cleaner fuel like natural gas.
	Expansion of piped natural gas (PNG) network to the different industrial places in Delhi – 1050 has already converted to PNG and 350 are in process of the conversion. Delhi government has also incentivized move to gas in industrial areas by offering subsidy and removing tax on gas. Official data shows 95 percent conversion of authorized industrial units.
Power Plants	Progressively shutting down coal power plants (total generation capacity of 1,245 MW) in the city and moving to natural gas -- Indraprastha (405MW): September 2009 -- Rajghat (135MW): May 2015 -- Badarpur (705MW): October 2018
	Natural gas made available for Bawana power plant
Vehicular emissions	CNG programme for public transport – autos, taxis and buses that was started a decade ago has been further expanded to include more commercial segments.
	Bharat Stage IV emissions standards for vehicles implemented in 2010 and Bharat Stage VI fuels with 10 ppm sulphur introduced in 2018.
	10 year-old diesel vehicles and 15 year-old petrol vehicles are being phased out
	Favourable taxation for clean fuel introduced; also expansion of CNG stations from original 9 to more than 500 in Delhi and NCR
	Environment Pollution Charge on big diesel cars (more than 2,000cc) has contributed towards disincentivizing personal diesel cars. Diesel cars sales have dropped.
	Pilot on Hydrogen-CNG buses started so that this improved H-CNHG could be option for older fleet of CNG vehicles.
	Use of remote sensing technology for monitoring emissions from on-road vehicles has been directed
	To check pollution from in-use vehicles, strengthening and improvement in Pollution under Control Programme (PUC) initiated across NCR. Enforcement has improved
	Installation of stage I and Stage II vapour recovery system initiated and expanded. Environmental compensation of Rs 1 crore imposed on oil

	companies: IOCL, HPCL and BPCL for non-compliance with directions on vapour recovery
Specific action on trucks: high-polluting segment of vehicles	The long-awaited bypass road to divert commercial traffic built: Eastern Peripheral Expressway and Western Peripheral Expressway (EPE and WPE), which were ordered in 2005 have been made functional in 2018-19, which has allowed commercial and extremely polluting trucks to bypass the city
	To deter non-destined truck traffic, the country's first congestion charging introduced in 2015. Environment Compensation Charge (ECC) on each category of commercial vehicles imposed at time of entry into city
	Restriction on entry of 10-year old trucks
	Introduction of RFID at 13 entry points in Delhi for cashless ECC payment will make the congestion charge effective.
Public transport	After stagnation and decline in bus numbers and passengers, procurement of new buses has started. Bus parking constraint is being addressed.
	NCR reciprocal agreement – autos and buses allowed to run across borders in entire NCR draft in 2008 and effective from 2010; Time for its renewal
	The ridership in the metro has increased from 6,25,000 in 2007-08 to 25,37,175 in 2018-19. The operational route has increased from 65.1 km in 2007-08 to 228.78 km in 2017-18
	Parking policy as a demand management tool notified. Pilot schemes on parking area management plans initiated.
Construction and Demolition waste and road dust	Checklist for dust control at construction sites made so that enforcement is improved
	The Construction and Demolition Waste Management Rules, 2016 notified
	There are 60 mechanized road sweeping machines in Delhi.
	Environmental compensation of Rs 1 crore has been imposed on Municipal bodies (New Delhi, South, East, North and Cantonment Board) over open dumping/burning of garbage and C&D waste vide directions dated January 16, 2019 under section 31A of the Air (Prevention and Control of Pollution) Act, 1981
	City has expanded recycling capacity of its C&D waste recycling plant at Burari from 500 MTD to 2,000 MTD. Two new plants are added to combined

	capacity of 650 MTD.
Waste burning	Solid Waste Management Rules and Regulations 2016 notified
	Delhi Bye-laws amended based on these rules and notified in January 2017
	The city has over 2300 waste dumps – neighborhood structures to collect and store waste. Over 80 percent of the waste is processed through incineration.
	Recently, Delhi fought a bitter battle to stop large-scale burning of plastics in Mundka area of Delhi that caused enormous poisonous gases.
	12 wards from different MCDs in Delhi have been selected as model wards for waste segregation and management 6,000 roadside twin bins procured.
Monitoring and Graded Response Action Plan (GRAP)	Air quality monitoring stations expanded to 38 in Delhi and over 50 in NCR
	Early Warning System for Delhi launched in October, 2018
	Graded Response Action Plan targeting key sources of pollution has been implemented during the winters of 2017-18 and 2018-19: These short-term measures during smog episodes include shutting down power plant, industrial units, ban on construction, ban on brick kilns, action on waste burning and construction, mechanised cleaning of road dust, etc. This also includes limited application of odd and even scheme.

DIRECTIONS:

57. In view of aforesaid, we *inter alia* reiterate and/or issue following directions:

(i). The decision taken by the High Level Committee constituted by this Court be placed on record along with comprehensive action plan and the action taken thereon so far.

(ii). With respect to preventing stubble burning, let a comprehensive plan be prepared and be placed before this Court including the action taken. Let Crop Residuary Management be prepared, its use *inter alia* as fertilizer, cattle food and bio fuel be also worked out. Let the final

decision be taken with respect to incentive and disincentive of Rs.100/- per quintal and the in-situ farming.

(iii). Let the Central Government, State Governments of Punjab, Haryana and U.P. prepare a scheme for making available Combine Harvesters, Happy Seeders, Hydraulically Reversible MB Plough, Paddy Straw Chopper, Mulcher, Rotary Slasher, Zero Till Seed Drill and Rotavators and balers especially dedicated to small and marginal farmers to be made available either free of charge or on nominal rental basis.

(iv). Let the Government of NCT of Delhi/NCR Region and concerned Governments of Haryana and U.P. file reports with respect to various identified hotspots and steps taken for their management and to clear the environmental hazards created by such hotspots.

(v)(a) As proposed in the reply of the Delhi Government, let the Smog Tower at Connaught Place be completed by Delhi Government as proposed in their reply affidavit. Let the Smog Tower be completed within three months.

(b) Let Smog Tower be installed at Anand Vihar as pointed out by Central Pollution Control Board (CPCB). Let Delhi Government provide space of 30 x 30 meters for installation of an experimental tower at

Anand Vihar within seven days. The project to be funded by the Union Government, however, Ministry of Environment, Forest and Climate Change is directed to monitor the project. Let project be completed within three months.

(vi). Let anti-smog guns be used in Delhi and NCR region for the following :

- (a) Large construction sites;
- (b) Road construction stretches, particularly during earthwork and compacting;
- (c) Mining activities;
- (d) Large parking sites on unpaved areas and during large public gatherings;
- (e) Demolition activities;
- (f) Sprinkling on dust-prone traffic corridors.
- (g) It be made compulsory to make use of anti-smog guns in Delhi-NCR in the projects that require environmental clearance from the State/Central level on site having built-up area of more than 20,000 sq.mts. including excavation, material handling and other dust generating activities. Let an appropriate policy decision be also taken with respect to cost of installation, duly considering the principle “polluters pay”

evolved by this Court.

(vii). The Governments of NCT of Delhi, U.P., Haryana and Rajasthan, are directed to identify the dumped waste of plastic, industrial and other wastes and to ensure that waste is not burnt and is used for processing/incineration and piled up waste is removed on time-bound basis without fail and report be filed within six weeks.

(viii). We direct the Pollution Control Boards of Delhi, Haryana, Rajasthan and U.P. to monitor the industrial areas especially at night also and to take stringent action with respect to the industries emitting black smoke from chimneys and it be ensured that the industries comply with the norms and standards for PM/NO_x/Sox.

(ix). For construction and demolition, we direct the Governments of NCT of Delhi, Rajasthan, Haryana and U.P. to file a status report regarding compliance with the Construction and Demolition Waste Management Rules, 2016. Let penal action be taken against the developers found flouting the norms.

(x). We direct the Governments of NCT of Delhi, Haryana, Rajasthan and U.P. to file status report on the penalty imposed and the action taken on the developers for violating the norms regarding construction/ demolition activity and whether any developer has been

blacklisted. Let various local bodies and Government of NCT of Delhi and Governments of Haryana, Rajasthan and U.P. also file status reports in this regard.

(xi). With respect to road construction, there has to be sprinkling of water. Let the Government of NCT of Delhi and Governments of Haryana, Rajasthan and U.P. file a status report with respect to compliance of road construction norms and details of non-compliant portion.

(xii). Let the Government of NCT of Delhi and Governments of Haryana, Rajasthan and U.P. point out the existing facilities of recycling of construction and demolition waste and the deficit of facilities in this regard.

(xiii). With respect to waste burning, compliance of Solid Waste Management Rules, 2016 be ensured by the Government of NCT of Delhi and Governments of Haryana, Rajasthan and U.P. Let a comprehensive plan for waste management be prepared and existing facilities and overall requirement be also worked out.

(xiv)(a). In the reports filed by the Chairman, EPCA indicating the details of his visit to New Friends Colony- Jhilmil Industrial Area, Saboli and Mandoli village -Mandoli Industrial Area, Bhopura Border,

Subzi Mandi Sahibabad, Hindon Vihar, Ghaziabad and Sahibabad Industrial Area certain problems have been pointed out and several observations have been made. We direct the concerned authorities of the area, District Magistrate, Ghaziabad, to ensure that all remedial measures are taken by the concerned bodies and report be submitted as to remedial work taken with respect to each and every observation which has been made in the report submitted by the Chairman, EPCA within one month.

(b). With respect to Panipat, the Inspection Report contains (1) Urban Extension Road, (2) Narela Industrial Area, (3) Panipat Industrial Area. Let the Deputy Commissioner ensure that appropriate measures are taken with respect to observations made in the aforesaid orders within one month.

(c). With respect to the visit to Meerut on October 12, 2019, various aspects have been pointed out. Let the District Magistrate, Meerut, National Highways Authority of India (NHAI), concerned Pollution Control Board, Municipal Commissioner, Meerut Nagar Nigam and Meerut Development Authority to take appropriate measures within one month.

(d). With respect to Mundka Tikri from the visit dated October 13, 2019, various observations have been made and problems have been

pointed out which are required to be attended by the concerned authorities. We direct the concerned authorities of the areas, District Magistrates, Pollution Control Boards, Deputy Commissioners of Municipal Corporations, to take the remedial measures and report pointwise compliance on each and every aspect of Report No.16 of EPCA Chairman within one month.

(e). With respect to EPCA Chairman visit at Bahadurgarh, the Haryana State Pollution Control Board (HSPCB), City Magistrate, Bahadurgarh, District Magistrate, Bahadurgarh and all concerned officials are directed to take remedial measures and compliance be reported to this Court within one month.

(f). In respect of the field visit of EPCA Chairman to Bhiwadi and other regions of Rajasthan, let the Government, RIICO, District Magistrate, Bhiwadi consider the recommendations made in the report and report the compliance to this Court within one month.

(g). Let the extracts of the reports with respect to aforesaid areas be forwarded to the concerned authorities by the EPCA for prompt compliance.

(xv). With respect to oxy furnace in glass industries, let the DST Technical Committee consider the proposal for installation of oxy

furnace in glass industries in Delhi and NCR. Let the consideration be made within two weeks in consultation with the sectoral expert and other concerned stakeholders. Relating costs and modalities be worked out.

(xvi). Let the details be worked out for chemical test methods for smoke emission control in various industrial sectors for meeting prescribed emission norms and entire details be furnished as to their use.

(xvii). Let proper research and development be made in wireless sensors network technology. Let the concerned officials consider further LiDAR (a laser based method) and Spectroscopic monitoring techniques as considered appropriate by them. Let the use of spectroscopy to monitor ambient air quality be considered by various States.

(xviii). Let the Government of NCT of Delhi work out the details with respect to 45% deficit capacity to lift the garbage and waste as there is only 55% capacity available with respect to garbage and waste generated in Delhi. Let it work out a comprehensive plan within three months to have full (100%) capacity to deal with garbage and wastes and place it before this Court, including the implements, tools, manpower and the expenditure required in that connection.

(xix). Let the action taken be reported with respect to the vehicles found plying on kerosene, checks undertaken and action taken report be placed before this Court within a month by the concerned Pollution Control Boards.

(xx). With respect to water quality supplied in Delhi, let the concerned Pollution Control Boards as well as the Indian Bureau of Standards, submit a report of random checking of various samples in Delhi and submit a report in this regard within one month.

(xxi). We direct the various State Governments through Chief Secretaries to inform this Court about the measures taken by them with respect to pouring of sewage and untreated industrial effluents in various rivers and the plan prepared by them and arrangement of funds made by them for the purpose of sewage treatment plants and existing facilities and requirements be pointed out within eight weeks.

(xxii). Let the Government of NCT of Delhi and Governments of Punjab, Haryana and U.P. show cause why they should not be saddled with the compensation for failure of their machinery and the concerned authorities in taking appropriate steps to prevent stubble burning and other pollution being caused.

(xxiii). With respect to solving traffic congestion, let the Government of

NCT of Delhi and Governments of Haryana, Rajasthan and U.P. work out a plan so as to solve the problem of traffic congestion and compliance of the orders passed earlier by this Court with respect to solving the problem of traffic congestion.

(xxiv). Let the concerned Municipal Corporations of Delhi, Government of NCT of Delhi, concerned bodies and Governments of Haryana, Rajasthan and U.P. to take care of potholes and file reports of action taken within three weeks and compliance report with respect to their previous directions be also filed and in case any work is left, let it be completed within three weeks.

Ordered accordingly.

.....**J.**
(ARUN MISHRA)

NEW DELHI;
JANUARY 13, 2020

.....**J.**
(DEEPAK GUPTA)