

GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

**RAJYA SABHA**  
**STARRED QUESTION NO. 47**  
TO BE ANSWERED ON 07.12.2023

**Air pollution in NCR and the country**

47 SHRI SANDEEP KUMAR PATHAK:

Will the Minister of ENVIRONMENT, FOREST AND CLIMATE CHANGE be pleased to state:

- (a) the details of funds released by the Central Government to each State/UT to combat air pollution in the last three years and the funds spent by them, year-wise;
- (b) the list of meetings called on by the Environment Minister with Chief Ministers/Ministers of Haryana, UP, Punjab, Delhi and other concerned States regarding air pollution in Delhi NCR during the last three years;
- (c) the list of attendees and the decisions taken during each meeting; and
- (d) the details of steps taken by Central Government to combat air pollution in Delhi-NCR during the last three years?

**ANSWER**

**MINISTER FOR ENVIRONMENT, FOREST AND CLIMATE CHANGE**  
**(SHRI BHUPENDER YADAV)**

**(a) to (d) :** A statement is laid on the table of the House.

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**STATEMENT REFERRED TO IN REPLY TO PARA (a) TO (d) OF THE RAJYA SABHA STARRED QUESTION NO. 47 DUE FOR REPLY ON 07.12.2023 REGARDING AIR POLLUTION IN NCR AND THE COUNTRY RAISED BY SHRI SANDEEP KUMAR PATHAK, HON'BLE MEMBER OF PARLIAMENT.**

**(a) :**

Ministry of Environment Forest & Climate Change (MoEF&CC) launched National Clean Air Programme (NCAP) in January, 2019 which is a long-term, time-bound national level strategy for prevention, control and abatement of air pollution with an objective to improve air quality in 131 Non-attainment and Million Plus Population Cities/Urban Agglomerations.

Central Government has earmarked an amount of Rs.19,711 Cr. to 131 cities during the period FY 2019-20 till FY 2025-26 out of which 49 Million Plus Cities/Urban Agglomerations are funded under Fifteenth Finance Commission (XVFC) air quality grant. An amount of Rs. 9,103.92 Cr. was released to 131 cities to implement City Action Plans in their respective cities during last three years (FY 2020-21 to 2022-23).

State-wise and year-wise details of funds released and utilization in 24 States/UTs having 131 targeted cities under NCAP are provided at **Annexure-1**.

**(b) & (c):**

List of meetings chaired by Hon'ble Minister of Environment, Forest & Climate change with Hon'ble Environment Ministers of Haryana, UP, Punjab, Delhi states is given below:

- Meeting of Hon'ble Environment Ministers of Delhi, NCR States and Punjab to discuss the implementation of action plan for improvement of Air Quality in NCR held on 23.09.2021.
- Meeting of Hon'ble Environment Ministers of Delhi and NCR States to review Air Quality Management in the NCR held on 11.10.2022.
- Inter-Ministerial Meeting under co-chairmanship of Hon'ble Union Minister of Agriculture & Farmers Welfare on the issues of Management of Crop Residue Burning held on 03.08.2023.
- Review Meeting on Air Quality Management in Delhi NCR with Hon'ble Environment Ministers of Delhi and NCR States held on 20.10.2023.

The details of discussion and decisions taken along with list of attendees in each of the meetings are given in Record of discussion of the meetings which are enclosed as **Annexure-II**.

**(d) :**

With a view to abate and control air pollution in Delhi / NCR, the Commission for Air Quality Management in NCR and Adjoining Areas (CAQM), constituted in 2021, has devised a comprehensive policy for abatement of pollution in NCR in July, 2022, stipulating sector specific action points quantifying targets along with timelines and implementation plan by various agencies in NCR States including the State of Punjab with respect to abatement of air pollution owing to crop residue burning. The policy framework details sector-wise interventions, quantified targets and timelines for various sectors viz. vehicular pollution, industrial pollution, dust from construction and demolition project activities, road and open areas dust, biomass burning, agricultural stubble burning, Municipal Solid Waste burning, fires in sanitary landfills and air pollution from dispersed sources etc.

Since inception the CAQM has so far issued 78 directions and 11 advisories, besides executive orders to various agencies concerned in the NCR including State Governments of Punjab, GNCTD, and various bodies of the Central and State Governments in the region. Due to these concerted efforts general improvements in the AQI level has been witnessed in the region.

To address the deterioration of Air quality actions under 'Graded Response Action Plan (GRAP)' are also imposed based on AQI. The GRAP calls for a set of emergent preventive/restrictive actions depending on air pollution levels, to be implemented by the identified agencies for combating the adverse air quality scenario generally prevailing in Delhi owing to unfavorable climatic and meteorological conditions during the winter months. Graded Response Action Plan (GRAP) for abatement of air Pollution in Delhi & NCR was notified by the Ministry of Environment, Forest and Climate Change in January 2017. The Commission has issued revised GRAP in October, 2023 which is being operationized by the Sub-Committee having representation from Pollution Control Boards/Committee of NCR State Governments and GNCTD, CPCB, IITM, Pune and IMD, New Delhi

The CAQM has deputed 40 teams of CPCB officers since December 2021, for conducting incognito inspections of air polluting industries, C&D sites, DG sets in Delhi-NCR to check implementation status of pollution control measures and compliance of other provisions of the Air (P&CP) Act, 1981. A total of 16037 units/ entities/ projects have been inspected as on November 24, 2023. Based on these inspections, CAQM has issued closure directions in 899 cases and out of these resumption orders have been issued in 708 cases while 132 cases are still under closure and cases of 59 balance units have been transferred to SPCBs / DPCC for final decision. Further, steps for control of stubble burning are as following:

1. MoA&FW in 2018 launched scheme for providing subsidy for purchase of crop residue management machinery and establishment of custom hiring centres (CHCs) in NCT of Delhi and the States of Punjab, Haryana and Uttar Pradesh. During 2018-2022, total fund released to Delhi and other States under the said Scheme is Rs. 2440.07 crores using which, over 2 lakh crop residue machineries have been delivered to individual farmers and CHCs, and over 39,000 CHCs have been established.

2. CPCB has framed guidelines for providing one-time financial assistance for setting up of paddy straw based pelletization and torrefaction plants which may help in addressing the supply chain issues and the issue of open burning of paddy straw in agriculture fields in Northern Region. A maximum amount of Rs. 28 lakhs or 40% of the capital cost considered for plant and machinery of a 1 TPH plant, whichever is lower, shall be given as one-time financial support by CPCB, subject to a maximum total financial support of Rs. 1.4 crore per proposal. A corpus of Rs. 50 crores has been earmarked for utilisation through the guidelines. A total of 10 plants have been approved so far.

3. An addendum to the above said CPCB Guidelines was also issued under which one-time financial assistance is provided to Municipal Corporations, Municipal Councils and Zilla Parishads of the states of Punjab, Haryana, NCT of Delhi and NCR districts of Uttar Pradesh and Rajasthan, for establishing paddy straw based briquetting plants for use of briquettes for crematoria only.

4. Directions issued by CAQM to State governments of Punjab, Haryana and Uttar Pradesh to strictly and effectively implement framework and revised action plan to eliminate and control stubble burning.

The details of various other steps taken by CPCB to combat air pollution in Delhi-NCR during the last 03 years is given at **Annexure-III**.

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## Annexure – I

<b>State and year wise details of funds released and utilization in 131 targeted cities during FY 2020-21,2021-22 and 2022-23 under NCAP</b>									
<b>S N</b>	<b>State</b>	<b>Fund released</b>				<b>Fund Utilized</b>			
		<b>FY 20-21</b>	<b>FY 21-22</b>	<b>FY 22-23</b>	<b>Total</b>	<b>FY 20-21</b>	<b>FY 21-22</b>	<b>FY 22-23</b>	<b>Total (Rs. in Cr.)</b>
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4=1+2+3</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8=5+6+7</b>
1	Andhra Pradesh	152.28	77.58	75.06	<b>304.92</b>	0.04	2.31	59.70	<b>62.05</b>
2	Assam	12.00	0.00	24.10	<b>36.10</b>	0.29	1.27	17.89	<b>19.45</b>
3	Bihar	211.00	88.97	7.09	<b>307.06</b>	8.34	56.20	102.02	<b>166.56</b>
4	Chandigarh	5.00	4.61	6.87	<b>16.48</b>	5.13	2.03	4.23	<b>11.39</b>
5	Chhattisgarh	120.00	68.70	57.94	<b>246.64</b>	0.08	23.87	53.81	<b>77.76</b>
6	Delhi	0.00	11.25	22.50	<b>33.75</b>	0.00	0.00	10.77	<b>10.77</b>
7	Haryana	48.00	6.25	19.28	<b>73.53</b>	0.00	0.78	0.00	<b>0.78</b>
8	Himachal Pradesh	10.00	0.48	3.59	<b>14.07</b>	0.09	7.39	5.61	<b>13.09</b>
9	Jammu & Kashmir	8.00	12.84	32.50	<b>53.34</b>	6.08	2.01	7.84	<b>15.93</b>
10	Jharkhand	159.00	72.44	42.00	<b>273.44</b>	0.00	14.83	116.68	<b>131.51</b>
11	Gujarat	405.00	217.71	173.29	<b>796.00</b>	19.31	142.66	343.60	<b>505.57</b>
12	Karnataka	280.52	154.67	128.52	<b>563.71</b>	6.94	1.49	3.02	<b>11.45</b>
13	Madhya Pradesh	300.52	151.20	135.04	<b>586.76</b>	224.92	178.05	103.50	<b>506.47</b>
14	Maharashtra	804.40	453.24	386.83	<b>1644.47</b>	0.51	19.76	449.49	<b>469.76</b>
15	Meghalaya	3.00	0.00	0.45	<b>3.45</b>	0	1.89	0.95	<b>2.84</b>

16	Nagaland	6	0.93	3.95	<b>10.88</b>	0	0.00	1.62	<b>1.62</b>
17	Odisha	6.04	3.64	38.52	<b>48.20</b>	0.23	3.23	42.33	<b>45.79</b>
18	Punjab	105.04	33.75	56.88	<b>195.67</b>	0.06	15.90	117.93	<b>133.89</b>
19	Rajasthan	284.80	122.94	103.76	<b>511.50</b>	0.69	9.86	351.30	<b>361.85</b>
20	Tamilnadu	236.00	131.70	129.22	<b>496.92</b>	102.50	192.05	176.22	<b>470.77</b>
21	Telangana	247.76	118.79	92.96	<b>459.51</b>	34.51	186.28	157.51	<b>378.30</b>
22	Uttar Pradesh	726.16	218.63	672.79	<b>1617.58</b>	44.10	354.67	607.40	<b>1006.17</b>
23	Uttarakhand	11.00	5.67	22.30	<b>38.97</b>	0.20	1.53	14.80	<b>16.53</b>
24	West Bengal	432.00	165.60	173.42	<b>771.02</b>	6.93	161.23	7.06	<b>175.22</b>
<b>Total</b>		<b>4573.52</b>	<b>2121.59</b>	<b>2408.86</b>	<b>9103.97</b>	<b>460.95</b>	<b>1379.29</b>	<b>3241.54</b>	<b>5081.78</b>

### Record of Discussion

#### Meeting of Hon'ble Ministers of NCR and Punjab to discuss the implementation of action plan for improvement of Air Quality in NCR Region

Date: 23.09.2021

Venue: Hybrid (Physical & VC)

1. A meeting of Hon'ble Environment Ministers of NCR and Punjab State was called under the Chairmanship of Sri Bhupender Yadav, Hon'ble Minister of Environment, Forests and Climate Change on 23.09.2021 @ 1030 hrs to discuss the preparedness and to address any issues which requires any inter-State and Inter-ministerial co-ordination for well-coordinated approach towards the concern of poor air pollution apprehended from burning of Parali (Paddy Stubble) during the ensuing harvesting season.
2. The meeting was attended by Sri. Manohar Lal Khattar, Hon'ble Chief Minister of Haryana, Sri. Sukhram Bishnoi, Hon'ble Minister for Forest & Environment, Govt. of Rajasthan, Sri. Gopal Rai, Hon'ble Minister for Environment, Forest & Wildlife, Govt. of NCT-Delhi, Sri. Dara Singh Chauhan, Hon'ble Minister for Forest, Environment & Zoological Gardens, Govt. of UP, Secretaries of Central Ministries and State Government, Chairman Commission for Air Quality Management in NCR &AA, Chairman and Member Secretary of Central and State Pollution Control Boards. The list of Participants is at **Annexure I**.
3. Hon'ble Minister Sri. Bhupender Yadav welcome all participants and highlighted that Air pollution in NCR is a cause of concern and the sources are diversified. Major sources which contributes to the poor air quality in the region, can be attributes to emission arising from seasonal burning of Parali and other continuous emission sources such as vehicular, Thermal power plants and other industrial emissions. He highlighted that CAQM has been constituted with participation of State Government of NCR and have been working in coordination with State Department. Many consultation meeting, advisories (8) and directions (42) have been issued by CAQM. Efforts and options are also being worked out by Central Ministries in consultation with concern department of States to evolve use of parali as resource.
4. He complemented the States for their efforts towards preparedness to plan for the measures in advance for abatement and control of burning of Parali and the coordinated work done so far.
5. Secretary, EF&CC highlighted that more than 12 meetings has been held in last 45 days with various ministries and Sate Governments to explore the possibilities to use the parali as resources viz. Supplementary use in Power Plants, Fodder in Fodder deficit area of Rajasthan and Gujrat. Task force has been formed to provide plan for fodder transportation. NTPC and other Thermal Power Plants in NCR has been directed to use 5-10% of Biomass as supplementary fuel and some enabling policy intervention in this regard is under consideration with Ministry of Power.
6. Dr. M. M. Kutty highlighted the preparedness made by the States administration on the action plan for prevention of paddy straw burning in ensuing harvesting season. He highlighted that the IT-enabled mobile tools are being used to allot machines by custom hiring centers, and the use of such machine will be higher.

Similarly, all States have taken aggressive efforts to promote the bio-decomposition through mass awareness campaign. He also highlighted some of the possible options for implementation for non-agricultural issues, which needs to be implemented by concern States.

7. Hon'ble Chief Minister of Haryana informed that the States has completed necessary preparatory work to control of Parali burning, which includes providing machines, incentives, monitoring of Red and Orange villages identified with respect to active fire events in last year and constitution of monitoring cum enforcement committee at each district and Taluka. He highlighted that his government has allocated Rs 200 Cr for providing incentives towards prevention and control of Parali burning in this year. He requested to consider the proposal submitted to MEF&CC for use of alternate clean fuel options for industries, where LPG/CNG/PNG infrastructure is not available.
8. Two power plants based on Biomass as fuel (6 ME + 60 MW) is under commissioning which will be consuming about 12 lakh MT of parali. Furnace Oil and Tyre Pyrolysis is banned activities in Haryana, and about more than 40000 MT compressed bailing facility is operational. 100 Kl of Ethanol plants using paddy straw is also under development. All brick kilns have been converted in zig-zag technology. Incentive for conversion of Diesel run Auto rickshaw to cleaner fuel is also provided.
9. Hon'ble Minister for Environment, Forest & Wildlife, Govt, of NCT-Delhi highlighted that using Pusa Bio decomposer, about 2000 acres were treated and very encouraging result has been observed both in-terms of soil enrichments and also betterment in yield of subsequent crop. He expressed that air quality management shall be taken up as on air-shed approach instead of area specific action plan. Delhi Govt, through its Electrical Vehicle is providing incentives to the buyers of EVs and Hot spot management has been also initiated to improve air quality. He highlighted that technologies are available for retrofitting the old DG sets to reduce the emission. He talked about the newly commissioned Smog Tower built in compliance to Hon'ble Supreme Court and requested other States to also adopt. All industries in Delhi are operating on PNG. Anti-Dust campaign, Red light On- Gaddi Off campaign has yielded good results and can be adopted by other States, specially Ghaziabad, Noida and Gurgaon.
10. Hon'ble Minister for Forest, Environment & Zoological Gardens, Govt of UP highlighting the success of bio-decomposing of stubble informed that State of UP has planned more than 10 lakh acres in this season. A very successful scheme "**Parali lao-Khaad le Jao**" is also availed by many farmers. Parali is also used in fodder at Goshala. UP was the first State to have dust management Cell operational and is working with World Bank on air shed approach for improvement of air quality in Indo-Gangetic Air shed. He also emphasized that there has been more than 23 Crore tree plantation with geo-tagging.
11. Govt of Punjab informed that necessary preparatory work has been completed for allocation and optimized used of machinery by the farmers. IT-enabled tools is being used. There has been significant reduction in non-basmati cultivation and it is estimated that harvesting may be staggered over longer period. Provision of an incentive fund of Rs. 25 CR has been made for the industries to switch over to cleaner fuel and promote parali with rice husk as fuel in industry. Religious leaders and local motivators are creating awareness to local farmers on ill effect of parali burning. 28 critical sites/zones have been identified



and the enforcement measures have been strengthened. It was also submitted that Central government may consider providing VGF for the power generating units to cover the extra financial liability arising due to higher cost of equipment and process as compare to convention fuel fed boilers. This will improve the off-take of parali as fuel in small and medium scale industry. Further it was also requested that NTPC may be requested to include Parali composition in the bio-mass to create a good market sentiments and assurance to the farmers that Parali is a resource for fuel.

12. Additional Secretary, MoP informed that the proposal for extending policy level supports such as merit order dispatch for promoting use of Bio-mass as fuel is under active consideration. Further, MoP is also considering to issue some regulatory advisory to SREC and CREC to extend enabling support for use of Bio-mass as fuel.
13. NTPC informed that condition to have minimum 50% paddy straw as constituent of bio-mass will be included in future tenders. The tender of 20 Million for next 3 years is in process and materials is expected to be lifted from ensuing season. Additional provision in the tender document to support the lifting of material from State of Punjab has been made. The impact on cost of power generation is Rs 5 paise per unit and can be pass through to the customer.
14. Joint Secretary, Fisheries, Animal Husbandry and Dairying, Govt of India, who is also heading the task force constituted for providing mechanism for use of non-basmati parali as fodder in fodder deficient areas of Rajasthan and Gujrat, informed the progress made by the task force. He informed that Gujrat (Kachch) and Rajasthan (Jaisalmer) has informed about 225000 MT and 30,000MT requirement. The issue of extra fund required for movement of fodder, first mile and last mile transportation is being workout. Options are being explored for fund to support the gap arising after consideration of state level relief fund is also being worked out. It was also informed that government machinery may not be in position to collect, process and transport in ensuing season, however, interaction with private entrepreneurs, working in this domain has shown encourage possibilities.
15. Joint Secretary, Agriculture and Farmer Welfare, informed that the 3<sup>rd</sup> Installment under their scheme to support the in-situ management has been process and will be released in this week. It was informed that the availability of the machinery at Custom Hiring Centers, especially in Punjab is to be strengthened and its utilization has to be improved by having better co-ordination at field level.
16. HMEF in his concluding remarks highlighted that the preparatory work informed by the States and CAQM suggests that significant reduction in burning of parali can be achieved in the ensuing season subjected to effective implementation of the action plan. Efforts of local administration and monitoring mechanism is vital and we all as a team has to continue to work in better co-ordination to achieve success. Use of newly developed active fire monitoring platform for real time data sharing will help in close monitoring. Wider use of bio-decomposition initiative taken by States (Delhi - 4000 Acres, Punjab – more than 5 lakhs Acres, Haryana – More than 1 Lakh Acres, UP – more than 10 Lakh acres,) reflects the commitment, which is further supported by the initiative towards alternate use of parali as fuel supplement in TPPs, Raw materials for Compressed Bio-Gas Plants and other industries. This will help in recognizing Parali as

resources and provide an opportunity for extra source of income for Farmers. Relevant information discussed is annexed as **Annexure II**.

17. He emphasized that the CAQM has been constituted with the objective to have Air-Shed approach to improve the air quality of NCR regions and the support and participation from State Governments to CAQM is appreciated and will help in achieving the envisaged objectives.
18. The meeting ended with thanks to Chair.

**List of Participants:**

<b>Sl. No.</b>	<b>Name of the Participant</b>	<b>Designation</b>
1.	Shri Bhupender Yadav	Hon'ble MEF&CC
2.	Shri Manohar Lal Khattar	Hon'ble Minister for Environment, Govt. of Haryana
3.	Shri Sukhram Bisnoi	Hon'ble Minister for Environment, Govt. of Rajasthan
4.	Shri Gopal Rai	Hon'ble Minister for Environment, Govt. of NCT of Delhi
5.	Shri Dara Singh Chauhan	Hon'ble Minister of Environment, Govt. of UP
6.	Shri Rameshwar Prasad Gupta	Secretary, MoEF&CC
7.	Shri Naresh Pal Gangwar	Joint Secretary, MoEF&CC
8.	Shri M.M. Kutty	The Chairman, CAQM in NCR & AA
9.	Shri Tanmay Kumar	Chairman, CPCB
10.	Shri Vivek Dewangan	Additional Secretary, Ministry of Power
11.	Ms. Somita Bishwas	Joint Secretary, Ministry of Agriculture and Farmers Welfare.
12.	Dr. O.P Chaudhary	Joint Secretary, Ministry of Fisheries and Animal Husbandry
13.	Shri Prashant Gargava	Member Secretary, CPCB
14.	Shri A.K. Nautiyal	Member Secretary CAQM in NCR & AA
15.	Smt. Sreya Guha	Principal Secretary, Department of Environment, Rajasthan
16.	Prof. (Dr) Adarsh Pal Vig	Chairman, Punjab Pollution Control Board
17.	Shri Krunesh Garg	Member Secretary, PPCB
18.	Shri Sanjeev Khirwar	Principal Secretary (Env & Forest), NCT of Delhi
19.	Dr. Vijay Singhal	CEE, Rajasthan SPCB
20.	Smt. Shailja Deval	Member Secretary, Rajasthan SPCB
21.	Shri Ashish Tiwari	Member Secretary, UPPCB
22.	Shri Sayed Musawwir Ali	Member Secretary, DPCC
23.	Shri Dilip Kumar	Principal Secretary to Govt. of Punjab, Department of Science, Technology & Environment
24.	Dr. Gurdeep Singh	CMD, National Thermal Power Corporation (NTPC)
25.	Dr. Ramesh Babu	NTPC
26.	Shri Ankur Garg	Uttar Pradesh Pollution Control Board (UPPCB)
27.	Shri Satyendra Pratrap Singh	UPPCB
28.	Shri S.K .Dutta	NLM Division.
29.	Shri Vivik Roy	CEO UPPCB (Meerut)
30.	Shri Sundeep	Director, MoEF&CC
31.	Shri R N Pankaj	Scientist 'D', MoEF&CC
32.	Shri Prasoon Tripathi	US, MoEF&CC
33.	Shri Vineet Kumar Mall	RA, MoEF&CC

**A. Comparative Active Fire Events in the State of Punjab and Haryana**

- Active Fire Events (AFE) for the states of Punjab and Haryana:

State	Year (2016)	Year (2019)	Year (2020)	% increase or decrease
Punjab	80930	76590	76590	<b>44.5% Increase</b>
Haryana	12564 (2017)	6652	5000	<b>25% Decrease</b>

- Punjab:** Districts of concern in

**Sangrur, Ludhiana, Bathinda, Faisalabad, Ferozpur, Moga,**

- Harayana : District of Concerns **Karnal, Kaithal and Fatehabad**

**B. Enforcement of ban on stubble burning**

State	FIR/Complaint registered	No. cases identified	Environmental Compensation (EC) collected (Rs.)
Haryana (since 2016)	464	4787 (District level consultative committee-DLCC)	86.46 Lakhs
Punjab (since 2018)	1785	40330 (EC imposed)	41.00 Lakhs

## **In situ Management of Parali**

- In field biodegradation of left over straw after harvesting is the concern as to avail the field for early sowing, farmers tend to burn this straw in field, thereby generating severe source of air pollution in the region.
- i. Optimized use of in-situ machineries available/provide to CHCs.
- ii. Use of bio-decomposition technologies.
- iii. UP has aggressively enforced the active plans and created an enabling environment for the farmers for better utilization of parali as resource:
  - a. Use as fodder in the gaushala
  - b. Common manure preparation facility
  - c. In situ bio composting in field. Successful acceptance of bio composting by the farmers, in situ bio-composting on a larger scale has been planned (1 lakh capsule).

## **Action initiated:**

1. Commission for Air Quality Management in NCR and Adjoining Areas (CAQM) has been constituted through promulgation of an Ordinance (13 of 2020) on 28.10.2020 which was enacted as an Act on 13.08.2021 to mitigate air pollution in National Capital Region (NCR) and Adjoining Areas passed.
2. The CAQM has taken many steps and interaction meeting with the stakeholders and have issued, in total, 8 advisories and 42 directions.
3. CAQM, in consultation with the SPCBs, has revised the comprehensive action plan of the states and submitted the progress report and communicated the details about the implementation of the action plan. The success of the action plan is purely dependent on the manner in which the plans will be implemented in the States.
4. Parali produced in Punjab will be used as Pashu-Ahaar (fodder) in Kutch, Gujarat with the help of M/o A&FW and M/o F&AHD, M/o Railways and Govt. of Punjab.
5. A Task force has been constituted under the Joint Secretary, D/o FAH&D with the members from M/o A&FW, M/o. EF&CC, M/o Railways, Commissioner (Agriculture) from the States of Punjab, Haryana, Gujarat & Rajasthan, Commissioner (Animal Husbandry) Commissioner (Relief) from Gujarat and Rajasthan and Commissioner (Transport) from the State of Punjab and Haryana. Govts. of Gujarat and Rajasthan will provide the exact demand and the estimate of annual requirement of non-basmati paddy straw (fodder) and Govts. of Punjab and Haryana will provide cost estimate for bailing, collection, storage to the Task force
6. Stubble biomass will be used as supplementary fuel in Coal based Thermal Power Plants (TPPs). NTPC has approved that it is technically feasible and implementable to co-fire bio mass pellets including that of paddy straw with coal in proportion up to 5-10 % in TPPs without any modification in the boilers. So,

the use of bio-pellets in TPPs is being promoted across the country. M/o Power has launched the National Biomass Mission for utilization of biomass with representatives from CEA, NTPC, DVC and NLC.

7. CAQM has issued direction to all TPPs in NCR to use bio-mass as supplementary fuel in their boilers. Many of the States governments have also encouraging other industries to use bio-mass based fuel to substitute coal
8. Satellite based estimation and marking of active fire event and its real time communication to the field officer have been made operational with the help of ISRO, M/O Agriculture, and respective State Government.
9. All States have taken aggressive awareness campaign to sensitize the farmers to discourage burning of stubble
10. M/o Agriculture has release fund amounting to Rs. 690.24 Cr to the States of Punjab (331.94 Cr), Haryana (193.35 Cr) and Uttar Pradesh (159.95 Cr) and IEC activities (5 Cr) to support the efforts for in-situ management of stubble by providing machineries and equipment to the farmers and Customer Hiring Center
11. Participation of private entrepreneurs is very much important to sensitize the Government's plan of Stubble Management. So, the private sector enterprises will be included for the implementation of the action plans.

### **Pusa Bio-decomposer Technology**

- Developed by Indian Agriculture Research Institute, Pusa, New Delhi
- 4 Capsules of this product can be scaled up to 25 L liquid formulation which can be applied In-situ to 1.0 Hectare (2.471 acres) of rice field having 4-5 tonnes of paddy straw.
- It accelerates the conversion of crop/paddy residue into manure in 20-25 days as reported in UP, Delhi, parts of Haryana and Punjab.

#### **Plan for utilization of Pusa Bio-decomposer Technology**

**Haryana** Free of cost to the farmers for management of 1 lakh acre in the state

**Delhi** Plan to use in more than 4000 acres of area under paddy, out of the total area 14600 acres.

**UP** 10 lakhs capsules (6.1 lakh acres) free of cost by Government.

**Punjab** Government target approx. 7413 acres

**Private Enterprise (UPL, Bangalore)**

- Target more than 5 lakhs acres in Punjab & Haryana
- More than 25,000 farmers registered (details district-wise attached)
- Rs. 500 per acre cost by company but free to farmers

**Record of Discussion**  
(11-Oct-2022)

**Meeting of Hon'ble Ministers of Environment to review Air Quality Management in the NCR region under the Chairmanship of Hon'ble MEF&CC**

A virtual Meeting with Hon'ble Chief Minister of Haryana, Hon'ble Ministers of Environment of Rajasthan, Uttar Pradesh, Punjab, GNCT Delhi and other officers was held on 11.10.2022 at 09.00 AM under the Chairmanship of Shri Bhupender Yadav, Hon'ble Minister of Environment, Forest and Climate Change. Shri Ashwini Kumar Choubey, the Hon'ble Minister of State, Environment, Forest and Climate Change, also attended the meeting virtually. The meeting was called to review the air quality management in Delhi NCR in view of ensuing anticipated winter air pollution due to paddy harvesting season and Diwali festival. The List of Participants is enclosed at Annexure.

2. Additional Secretary, EF&CC welcomed Hon'ble Environment Ministers of NCR states and other dignitaries and apprised the agenda of the meeting.
  
3. With the permission of the Chair, Commission for Air Quality Management in NCR & AA (CAQM) made a presentation on the progress made so far in major identified sectors as follows:
  - i. Agricultural Stubble Burning,
  - ii. Industrial Pollution & Pollution from DG sets,
  - iii. Vehicular Pollution & Electric mobility,
  - iv. Dust from Road and Open Areas, Greening / Plantation,
  - v. Dust from Construction and Demolition Activity,
  - vi. Biomass/MSW burning/Fires in SLF sites,
  - vii. Episodic events like bursting of fire crackers,
  - viii. Graded Response Action Plan (GRAP),
  - ix. Monitoring and Enforcement.

The Commission informed that different concerned agencies have been directed for targeted short / medium/ long-term actions in various sectors. It was also informed that a decrease has been observed in the stubble burning events in Delhi NCR region in comparison to previous year with Rajasthan having zero case reported. Citing the data on paddy residue burning events, the Commission requested HMEF&CC to direct States to expedite actions for in-situ management for utilization of available machinery under CRM scheme through Custom Hiring Centres and Cooperatives and to extend area for the application of bio-decomposer.

A new revised Graded Response Action Plan (GRAP) for Delhi NCR region has been circulated by CAQM. It has now been linked to the AQI for a better understanding of the people. Now, the appropriate actions will be undertaken in advance. Continuous efforts have been made in the direction of shifting of the industries to cleaner fuels in Delhi NCR. A standard list of approved fuels has been released and solid and liquid fuels are strongly targeted



to be eliminated. Biomass as a fuel is approved and promoted. A significant number of industries have been shifted to cleaner fuels, some have been notified and some have been permanently closed down. More areas are being covered under PNG/CNG supply.

For the elimination of DG Set operation in Delhi NCR, various directions have been issued and un-interrupted power supply in Delhi NCR region is targeted and worked upon continuously. In case of bursting of firecrackers, the Orders of the Hon'ble Courts are followed and only Green Cracker are allowed. This will be strictly monitored in this Diwali season in order to totally restrict the usage of Non Green Firecrackers. Effective steps have continuously been taken by CAQM for management of Road Dust and C&D waste with positive outputs.

4. Hon'ble Environment Ministers of NCR states and NCT Delhi apprised the Chair about preparedness in their States and UT with regard to: (i) prevention and control of agricultural (paddy) stubble burning and action plan for various ex-situ and in-situ management, (ii) measures to control particulate matters and emissions from continuous sources: DG sets, vehicular, industrial, C&D activities, dust from road and open areas, greening etc.

5. Shri Manohar Lal, Hon'ble Chief Minister and Environment Minister of Haryana apprised about the efficient steps taken for the air pollution abatement in Haryana. It was informed that ex-situ steps for the management of Parali are being taken continuously and approx. 72,777 machines have been distributed to the farmers in last 4 years. Hon'ble CM added that under in-situ management, 23 lakh MT crop residues will be utilised through various machines and decomposers and 13 MT crop residues will be utilized under ex-situ management. An incentive of Rs. 1000/acre is being provided to the farmers for bailing and Rs. 500 per acre for transportation of bails to Gaushalas. A total of Rs. 1000/MT is being provided to the cluster identified by IOCL for 2G-Bio-ethanol plant at Panipat for supply of 2 Lakh MT residue management. Tenders have been floated for providing 20 Lakh MT briquettes/pellets for supply to NTPCs.

6. Shri Hemaram Choudhary, Hon'ble Environment Minister, Rajasthan apprised about the action taken and progress achieved for air pollution abatement in NCR districts of Rajasthan and it was ensured that CAQM's directions are strictly followed. Out of 525 industrial units, 300 have switched over to PNG, 52 units have been closed and 23 units will be closed soon. Other units are facing the issue of PNG supply in their area. The area under green cover has been substantially increased with massive plantations.

8. Shri Gopal Rai, Hon'ble Environment Minister of NCT Delhi informed that it has prepared 15-point action plan which will be launched on 30<sup>th</sup> Sep 2022. Hon'ble Minister updated on the various action initiated in view of ensuing winter pollution which include improvement in bio-decomposer applications, installation of anti-smog guns, PUC management, Red Light On Gaadi Off campaign, monitoring of biomass burning, shifting of industries to clean fuels, ban on firecrackers, Institution of Paryavran Mitra, deployment of electric public transport, awareness campaign etc. Hon'ble Minister suggested that there is need to constitute a Regional

Action Force under Senior Officer which needs to make surprise visits to see the implementation of action plan on the ground level.

9. Dr. Arun Kumar Saxena, Hon'ble Environment Minister, Uttar Pradesh apprised HMEF&CC of the actions taken and progress achieved for air pollution abatement in NCR districts of Uttar Pradesh. It was informed that the Government has prepared the action plan to deal with air pollution. The application of bio-decomposer has been increased and about 1470 farm equipments have been provided to Gram-Sabha. 170 farm machineries have been provided free to the Gram-Sabha. Directions have been issued to transport department to ensure that diesel are used in limited quantity. The actions have been initiated with regard to PUC management, anti-smog guns, control of pollution due to C&D activities, Road Dust management, extensive plantation etc.

10. Shri Gurmeet Singh Meet Hayer, Hon'ble Environment Minister, Punjab enumerated various action initiated for control of stubble burning in the State through ex-situ and in-situ management. It was informed that Punjab has less CRM machines available against the requirement. The available farm machineries are accessed to the farmers with the help of I-khet apps and other platforms.

11. Shri Ashwini Kumar Choubey, HMoS, EF&CC appreciated the efforts made by MoEF&CC, Partner Ministries, CAQM, Government of NCT of Delhi and NCR states and concerned agencies and hoped that with the collaborative efforts of all stakeholders, local administration, regulatory bodies and enforcement agencies, with aggressive awareness campaign at field and villages level, the burning of stubble in field or otherwise can be prevented and controlled to a large extent. He stated that collaborative actions by all concerned central and state agencies shall ensure that the stubble burning is minimized this season.

12. The Hon'ble Minister of Environment, Forest and Climate Change (MEF&CC) stated that several meetings have been held with CAQM, CPCB, DISCOM, NTPC and state functionaries for the management of air pollution in Delhi NCR. Also, requests were made to other Ministries to convene high level meetings to encourage participatory and coordinated approach of the States and UT of Delhi NCR. Hon'ble MEF&CC urged the State Governments to help coordinate for effective crop residue management, dust management and shifting of industries to cleaner fuels in the ensuing winter harvesting season on priority. Hon'ble Minister also addressed the issue of transition of industries to clean fuels and measures to control particulate matters and continuous emission sources. DISCOMs were directed to ensure un-interrupted power supply for emergency services and during the implementation of Graded Response Action Plan. Hon'ble MEF&CC also requested State Governments to enforce banning of non-compliant DG sets.

Hon'ble MEF&CC suggested State Governments to direct their regulatory bodies and enforcement agencies to keep strict vigil and to intensify actions for effective control of restrictive and non-compliant polluting activities.

In his concluding remarks, HMEF&CC appreciated the actions planned by the States to combat air pollution. He expressed confidence that this participatory and coordinated approach of all stakeholders, regulatory bodies and enforcement agencies, with aggressive awareness campaign will yield positive results.

The Environment Ministers of NCR, GNCTD and Punjab assured their commitment to manage air pollution and to follow all directions of CAQM and the Ministry to address the issues.

The meeting ended with the permission of the Chair.

### **List of Participants (Tentative)**

1. Shri Bhupender Yadav, Hon'ble Minister, EF&CC
2. Shri Ashwini Kumar Choubey, Hon'ble Minister of State, EF&CC
3. Shri Manohar Lal, Chief Minister and Minister for Environment, Haryana
4. Shri Gopal Rai, Minister of Environment, NCT of Delhi
5. Shri Hemaram Choudhary, Hon'ble Minister for Environment & Forest, Rajasthan
6. Shri Gurmeet Singh Meet Hayer, Hon'ble Minister for Environment, Punjab
7. Shri Arun Kumar Saxena, Hon'ble Minister for Environment, Uttar Pradesh
8. Dr. M. M. Kutty, Chairperson, CAQM
9. Shri Naresh Pal Gangwar, Additional Secretary, MoEF&CC
10. Shri Arvind Kumar Nautiyal, Member Secretary, CAQM
11. Dr. O.P. Chaudhary, Joint Secretary, MoFAH&D
12. Shri Suman Majumdar, Deputy Secretary, Ministry of Power
13. Shri Ved Prakash Mishra, Director (CP), MoEF&CC
14. Principal Secretary Environment, GNCTD
15. Dr. Prashant Gargava, Member Secretary, CPCB
16. Shri R.N. Pankaj, Scientist 'D', MoEF&CC
17. Chairman, NDMC
18. Commissioner Municipal Corporation Gurugram
19. Member Secretary, UPPCB
20. Member Secretary, Punjab PCB
21. Member Secretary, Rajasthan SPCB
22. Joint Director Engineering, UP
23. Shri Ramesh Babu, Director (Operations), NTPC Ltd
24. Shri S.P.S. Virk, GM (Biomass), NTPC Ltd
25. Commissioner Agriculture, Department of Agriculture, Govt. of Rajasthan
26. Shri Kunji Lal Meena, Principle Secretary (Urban Development), Govt. of Rajasthan
27. Principal Secretary Agriculture, Rajasthan
28. District Magistrate, Alwar
29. District Magistrate, Ghaziabad

30. Municipal Commissioner, Faridabad Municipal Corporation
31. Punjab Energy Development Agency (PEDA)
32. Rajasthan State Wide Area Network (RajSWAN)
33. Municipal Commissioner, Ghaziabad
34. Meerut Municipal Corporation
35. Noida Municipal Corporation
36. Urban Development Department, GNCTD
37. Regional Office, Noida
38. Regional Office, Meerut
39. Regional Office, Kaithal
40. Punjab Energy Development Agency (PEDA)
41. ADM(E) Gautambudh Nagar
42. Chief Engineer, Govt. Punjab
43. Department of Information Technology & Communication (DOITC), Alwar
44. Bhiwadi Integrated Development Authority (BIDA), Alwar
45. Directorate of Urban Local Bodies Department, Haryana
46. SP, Bhiwadi
47. DC, Gurugram
48. CDO Raebareli
49. CMD, Rajasthan Rajya Vidyut Prasaran Nigam Limited (RVPN)
50. Jalandhar Development Authority (JDA), Punjab
51. ADC Gurugram
52. CE Guru Gobind Singh Super Thermal Power Plant (GGSSTP), Ropar

**Record of discussion-Minister Level Inter-Ministerial Meeting on the issues of  
Management of Crop Residue Burning held on 03.08.2023**

An Inter-Ministerial Meeting in hybrid mode to discuss the issues of Management of Crop Residue Burning was held on 03.08.2023 under the Co- Chairmanship of Hon'ble Union Minister for Agriculture and Farmers Welfare and Hon'ble Union Minister for Environment, Forest & Climate Change. Apart from the Union ministers, the meeting was attended through VC by Shri Gurmeet Singh Khudiyar, Hon'ble Agriculture Minister of Punjab, Shri Jai Prakash Dalal, Hon'ble Agriculture Minister of Haryana, Shri.Gopal Rai, Hon'ble Minister of Environment, Delhi, Secretary, DA&FW, Secretary, MoEF, DG,ICAR, Chief Secretary, Punjab, and other senior officers from DA&FW, MOEF, ICAR, Govt of Punjab, Haryana and Delhi.

The list of participants is at Annexure-I.

After a welcome address, Secretary, DA&FW, briefed about the meeting objectives. He stated that the burning of crop residue in the States of Punjab, Haryana, UP and Delhi has been coming down due to the timely interventions of the Government under Crop Residue Management scheme. Adequate funds have been released to the State Governments in time for providing crop residue machines and establishment of CHCs, so that farmers do not resort to burning of paddy stubble. Further the States and the ICAR institutes have been carrying out intense IEC activities to prevent paddy stubble burning. As a result, the burning events had come down by 31% in the year 2022. Similarly, advance action to further reduce paddy stubble burning in the current year needs to be initiated.

After the introductory remarks of Secretary (DA&FW), the concerned State officers presented their State's preparedness/ plans to check the paddy straw burning events in the current season.

**Government of Punjab:**

- Six districts Pathankot, SBS Nagar, SAS Nagar, Hoshiarpur, Malerkotla &Ropar, is identified for achieving "Zero percent" paddy straw burning during 2023. Other districts is targeted to reduce the Straw burning events by 50% in comparison to 2022.
- Sufficient CRM machines are being made available to the farmers and 20,000 more machines are being added during 2023. New new paddy seed varieties which matures 25-30 days earlier and have 10% of less biomass are being promoted.

- The State has fixed a target of in-situ management of 11.5 million tons of paddy straw with the available machinery in the current season.
- New machines like Surface Seeder for in-situ management of paddy straw is being experimented. Surface Seeder has been under research trial for the last 2 year at PAU and may be covered under CRM/SMAM.
- Under ex-situ management of paddy straw, the Punjab Government is working on bio mass based **Industrial Boiler Plants** of 20 t/hr capacity with total capital cost of Rs 7.5 crores.
- The State sought support of GOI for transport of 10-15 lakh tons of paddy straw to Rajasthan and Gujarat as fodder on subsidized rate to GAUSHAALLA.
- The State also posed a request for supply of 24,000 metric tons of urea in view of the paddy crop damaged in 2.5 lakh acre of farmers field due to flood and re-transplantation of paddy in that area.

**Government of Haryana** : The State informed that a multi-pronged strategy is being followed to prevent paddy stubble burning i.e.

- IEC activities, providing machines, use of pusa decomposers, cash incentives, crop diversification through cash incentives, promoting direct rice seeding and fine for burning of paddy straw. Paddy straw at subsidized rate of Rs 500/acre is also provided to the Gaushalas.
- Scope of supplying paddy straw to the Rajasthan where it is used as cattle feed in their Gaushalas and to Gujarat where it is used in packaging industries needs to be promoted.
- As per the feedback from the farmers, there is a need to improve the quality of the PUSA decomposer to reduce the period of paddy decomposition which is much higher than the period claimed by the scientist/experts.

**Government of Uttar Pradesh**: It was informed that the paddy stubble burning instances have come down in UP and in NCR as a result of implementing the CRM scheme and strict monitoring by the State authorities. Large scale use of decomposers of IARI Pusa in individual field of farmers and for decomposing paddy straw in public pits will be taken up this year. A scheme “**parali Do Khaad lo**” has been successfully implemented in 9 districts of U.P. Under this Scheme, the individual farmers gets the Cow dung manure of the amount equal to the paddy Straw supplied to the Gaushalas. This scheme will also be extended to the other Districts of UP.

## **Government of NCR, Delhi:**

With the joint efforts of Center and State Governments, the Pollution level has been reduced by 30% and at the level of AQI, the nos. of bad days (Severe polluted) has been reduced from 36 days in 2018 to 6 days during 2022. Delhi Government is actively promoting the use of PUSA decomposer for the in-situ management of Paddy Straw. The spraying of decomposer is done under the supervision of the experts of their State department to ensure its maximum efficiency and effectiveness. However, there is a need to reduce the no of days taken to decompose the straw and hence it was suggested to discuss the issue with ICAR scientists to make it more effective and acceptable among the farmers.

**Remarks of Shri Bhupender Yadav, Hon'ble Union Minister of Forest, Environment and Climate Change:** Speaking on the occasion, the Union Minister for Environment stated that efforts to prevent paddy stubble burning for the last five years is bearing good results. Due to the concerted efforts of agencies like Commission for Air Quality Management, burning instances in the States of Punjab, Haryana, Uttar Pradesh, NCT of Delhi has come down. There is a need to encourage ex situ management of paddy straw which will provide raw materials to the user industries like Power, bio mass etc.

**Remarks of the Hon'ble Minister for Agriculture Shri. Narendra Singh Tomar:** The Hon'ble Minister congratulated all the stakeholders for the seriousness that they have shown in addressing the issue of paddy stubble burning. He observed that due to the efforts of all the stakeholders, the events of paddy stubble burning is continuously coming down. However, paddy stubble burning is not just related to pollution of Delhi and its adjoining areas. It is also creating a detrimental effect on the farm land by adversely affecting the soil health and its fertility. Hence, our efforts have to be both for fighting air pollution in Delhi and for protecting the soil health, thereby protecting the ultimate interests of our farmers.

The aim in the current season is to work towards achieving zero stubble burning. The Government of India is providing sufficient funds under CRM scheme to the four States and they must ensure proper utilisation by providing machine to the farmers in a timely manner. There is a need for proper monitoring at the State level to ensure proper utilisation of the machines and the use of bio- decomposer. The focus should also shift on using paddy straw for commercial purpose by way of ex situ management. Awareness creation to prevent stubble burning through various mechanisms needs to be stepped up. Agencies like Agriculture Technology Management Agencies (ATMA) needs to be used to their fullest potential.



**Actionable Points:**

To achieve Zero percent paddy straw burning during 2023 in six districts of Punjab namely; Pathankot, SBS Nagar, SAS Nagar , Hoshiarpur, Malerkotla & Ropar and to reduce the Straw burning events by 50% in comparison to 2022 in other districts. To chalk out the plan to achieve the targets.

Action: Govt. of Punjab

PAU has developed a new Machine Surface Seeder for in-situ management of paddy straw. This machine has been under research trial for the last 2 years at PAU. During 2023-24, Govt. of Punjab have planned for promoting this machine at larger scale and requested its inclusion under the CRM /SMAM Scheme of DA&FW.

Action: M&T Division

Ministry of Agriculture and Farmers Welfare may facilitate Govt. of Punjab and Govt of Haryana in transporting 10-15 lakh tons of paddy straw to Rajasthan and Gujarat State for supplying straw on subsidized rate to GAUSHAALLA.

Action: M&T Division

In 25 Districts of UP, where incidences of paddy straw burning are more than other districts, villages as HOT SPOTS are being identified and the IEC campaign has been launched to educate farmers in such villages. The govt. of UP will chalk out the plan to curb the paddy straw burning events in the hot spots.

Action: Govt. of U.P.

Govt. of Delhi requested to have a Joint meeting of the Scientists and experts of the ICAR & Ministry to explore the possibility of reducing the decomposition period to 10 to 12 days to make its more effective and acceptable among the farmers.

Action: Govt. of Delhi, DG (ICAR) , M&T Division

Ex-situ management of paddy straw needs to be promoted extensively.

Action: All stakeholders

## List of Participants

Sr.No.	Name	Designation
<b>A</b>	<b>Ministers</b>	
1.	Sh. Narendra Singh Tomar	Union Cabinet Minister for Agriculture and Farmers Welfare
2.	Sh. Bhupender Yadav	Union Cabinet Minister for Environment, Forest & Climate Change
3.	Shri Gurmeet Singh Khudian,	Hon'ble Minister for Agriculture, Punjab
4.	Shri Jai Parkash Dalal,	Hon'ble Minister for Agriculture, Haryana
5.	Shri Surya Pratap Shahi,	Hon'ble Minister for Agriculture, Uttar Pradesh
6.	Shri Gopal Rai,	Hon'ble Minister for Environment, Forest and wild life, Delhi
<b>B</b>	<b>Central Ministries /Department Officers</b>	
7.	Ms. Leena Nandan, Secretary	Secretary, Ministry of Environment, Forest and Climate Change
8.	Shri Manoj Ahuja,	Secretary, DA&FW
9.	Dr. Himanshu Pathak ,	Secretary (DARE) & Director General (ICAR)
10.	Shri MM Kutty	Chairman, CAQM
11.	Shri Rakesh Ranjan,	Additional Secretary, DA&FW
12.	Shri Tanmay Kumar	Addl. Secretary, Ministry of Environment, Forest and Climate Change
13.	Dr. Suresh Kumar Chaudhari,	DDG (Natural Resource Management), ICAR
14.	Dr. S.N. Jha,	DDG (Agricultural Engineering),ICAR
15.	Dr. Udham Singh Gautam,	DDG (Agricultural Extension),ICAR
16.	Shri Arvind Nautial,	Joint Secretary, Ministry of Environment, Forest and Climate Change
17.	Ms. S Rukmani	Joint Secretary, M&T, DA&FW
18.	Dr. Prashant Gargava,	Member Secretary, CPCB
19.	Dr. K.P. Singh,	ADG ( Agril. Engg.), ICAR, New Delhi
20.	Dr Rajbir Singh,	ADG (NRM)-ICAR
21.	Dr Pannalal Singh.	Pr. Scientist, IARI, Pusa

22.	Sh Ved Prakash,	Director, Ministry of Environment, Forest and Climate Change
23.	Shri, C.R. Lohi,	DC (M&T), DA&FW
24.	Shri A.N. Meshram,	DC(M&T), DA&FW
25.	Shri Rajiv Thakur	Agri Engg, (M&T), DA&FW
26.	Shri P.K. Chopra,	Consultant, M&T, DA&FW
<b>C.</b>	<b>State Government Officers</b>	
27.	Shri Sanjeev Kaushal	Chief Secretary, Govt. of Haryana
28.	Shri Anurag Verma,	Chief Secretary, Govt. of Punjab
29.	Shri Devesh Chaturvedi,	Additional Chief Secretary (Agriculture), Govt. of Uttar Pradesh
30.	Sh. K.A. P. Sinha	Additional Chief Secretary, Agri. and Farmers Welfare, Govt. of Punjab
31.	Sh. Vineet Garg,	Additional Chief Secretary, Environment, Forest and Wild Life, Govt. of Haryana
32.	Shri Narhari Singh Banger	Director, Agri., Govt. of Haryana
33.	Dr. Gurvinder Singh,	Director, Agri. Govt. of Punjab
34.	Sh.. Arshdeep Singh Thind	Secretary Agri, Govt. of Punjab
35.	Sh. Rahul Tiwari,	Secretary, Science and Technology, Govt. of Punjab
36.	Sh. G. S. Majithia,	Member Secretary, PPCB,, Punjab
37.	Sh.Pardeep Kumar	MS, HSPCB, Govt. of Haryana
38.	Er. Jagminder Nain	Joint Director, Agri, Engg., Govt. of Haryana
39.	Shri J.P. Chowdhary,	Joint Direct ( Agri. Engg.), Govt. of UP
1.	Shri A.K. Singh,	Dev. Secretary, Govt. of Delhi

**Record of Discussion**  
**(20<sup>th</sup> October, 2023)**

**Review Meeting on Air Quality Management in Delhi NCR under the Chairmanship of Hon'ble, Minister of EF&CC**

Hon'ble Minister for Environment, Forest and Climate Change chaired a meeting through video conferencing on 20<sup>th</sup> October, 2023 at 09:00 AM with Hon'ble Minister of State, EF&CC and Hon'ble Ministers for Environment of Delhi & NCR states i.e. Haryana, Punjab, Rajasthan and Uttar Pradesh to review Air Quality Management in Delhi NCR.

2. The list of attendees is enclosed as **Annexure-I**.
3. The meeting was commenced with a welcome address by the Secretary, EF&CC followed by opening welcome remarks by the Hon'ble Minister of State, EF&CC.
4. Hon'ble Minister EF&CC in his address complimented NCR states for collective efforts towards the mitigation of air pollution in the Delhi NCR. It was emphasized that continuous progress is required to achieve the milestones in the journey of air pollution-free Delhi NCR and the targets should be higher than the achievements of the last two years. He also directed that suggestions made during the meeting be considered and incorporated appropriately in the winter action plan.
5. Additional Secretary (CP), MoEF&CC apprised the Hon'ble Minister regarding the agenda of the review meeting and invited the Chairperson CAQM for a brief presentation.
6. With permission of the Chair, Member Secretary, CAQM made a presentation with regard to the status and actions taken and steps needed to be taken in the major sectors affecting air quality. The major focus was given to:
  - i. Prevention and control of paddy stubble burning
  - ii. Co-firing of Biomass by TPPs
  - iii. Industrial Pollution- Status of Shifting of industries in NCR to approved fuels
  - iv. Regulations for running of DG Sets in NCR
  - v. Graded Response Action Plan (GRAP)
  - vi. Vehicular Pollution – Cleaner public transport services in NCR
  - vii. Abatement of air pollution from firecrackers
7. CAQM apprised in the meeting that 7442 industrial units out of 7759 in NCR have shifted to approved fuels and the remaining 317 industrial units are either self-closed or closed under the direction(s) of concerned Pollution Control Boards. PNG infrastructure/supply will be available in all the industrial areas by the end of 2023. With regard to the prevention of paddy stubble burning in the coming winter harvesting season, CAQM stated that Haryana and UP have the targets of zero burning cases and Punjab may achieve the target of at least 50% reduction in fire events in 18 districts along with zero cases in 5 districts.

8. With regard to DG Sets, these are permitted for all capacity ranges without emission control only till 31.12.2023 and for emergency purposes.

9. All bus services between NCR cities/towns in the States of Uttar Pradesh, Haryana, Punjab, Rajasthan and Delhi shall be operated only through EV/CNG/BS-VI Diesel buses w.e.f. 01.11.2023

10. Hon'ble Minister for Environment Delhi mentioned that the total number of Days with "Good – Moderate" AQI have been reported more than 200 days in the current year which is a significant increase in comparison to the past two years and indicates that efforts are giving positive results.

11. Hon'ble Minister for Environment Uttar Pradesh appreciated the timely conduction of the review meeting for setting a roadmap for the winter action plan in Delhi NCR. It was informed that war rooms have been established in NOIDA, Greater NOIDA, Ghaziabad for centralized decision-making in air pollution-related matters. The incidents of stubble burning need to be controlled in all the NCR districts with incentivizing the farmers to eliminate the root cause of the problem.

12. Hon'ble Minister for Environment Punjab informed that Punjab is a major producer of agricultural crops in the country and hence parali is also generated in large quantity. It was informed that awareness regarding parali management is gradually increasing among farmers and stubble burning incidents have been reducing on year on year basis.

13. The ACS, Haryana informed that the efforts towards zero stubble burning cases are underway and the number of incidents has been reduced in comparison to the previous year. To achieve the co-firing of biomass pellets in Thermal Power Plants (TPPs) procurement has been started.

14. The ACS, Rajasthan informed that industries in the NCR region of Rajasthan have been shifted to the approved fuel and proper power supply is being ensured for minimizing usage of DG sets. Plantation in all available areas has been increased by 50% in comparison to the same in last year. Further, steps have already been taken to ensure that only BS VI compliant buses are operated in the Delhi NCR region.

15. The Chairperson CAQM emphasized that all the stakeholders and executing agencies were now well aware of the actions to be taken under the GRAP and the need of the hour is to implement action plans on the ground.

16. In his closing remarks, Hon'ble Minister of State, EF&CC called for a collective action against the air pollution problem in Delhi NCR as this is not contained by regional boundaries. Realization of action plans on the ground and adoption of the environment-friendly lifestyle under Mission LiFE was emphasized.

17. Meeting ended with thanks to the Chair.

## **List of Participants**

1. Shri Bhupender Yadav, Hon'ble MoEF&CC
2. Shri Ashwini Kumar Choubey, Hon'ble Minister of State, EF&CC
3. Smt. Leena Nandan, Secretary, MoEF&CC
4. Shri Gopal Rai, Hon'ble Minister of Environment, NCT of Delhi
5. Shri Arun Kumar Saxena, Hon'ble Minister for Environment, Uttar Pradesh
6. Shri Gurmeet Singh Meet Hayer, Hon'ble Minister for Environment, Punjab
7. Dr. M.M. Kutty, Chairman, Commission for Air Quality Management for Delhi-NCR & Adjoining Areas (CAQM)
8. Shri Tanmay Kumar, Additional Secretary, MoEF&CC & Chairman, CPCB
9. Shri Naresh Pal Gangwar, Additional Secretary, MoEF&CC
10. Shri Vineet Garg, Additional Chief Secretary to Govt. Haryana, Forests & Wildlife
11. Shri Shikhar Agarwal, Addl. Chief Secretary (Environment), Govt. of Rajasthan
12. Shri Manoj, Kumar Singh, Additional Chief Secretary (Environment), Govt. of UP
13. Shri K.P. Sinha, Special Chief Secretary, (Agriculture), Govt. of Punjab
14. Shri Arvind Kumar Nautiyal, Member Secretary, CAQM
15. Shri Piyush Singh, Joint Secretary, Ministry of Power
16. Ms. S. Rukmani, Joint Secretary, MoA&FW
17. Shri Anil Kumar Singh, Principal Secretary, (Environment), GNCTD
18. Shri Ashwani Kumar, Principal Secretary, (Home), GNCTD
19. Shri A. Anbarasu, Principal Secretary, (PWD), GNCTD
20. Shri Rahul Tiwari, Principal Secretary, (Environment), Govt. of Punjab
21. Shri Ashish Tiwari, Principle Secretary (Environment), Govt. of UP
22. Ms. Sakshi Mittal, Addl. Commissioner MCD (Engg), GNCTD
23. Dr. Saket Kumar, MD UHBVN
24. Dr. Prashant Gargava, Director, MoEF&CC
25. Shri Bharat Kumar Sharma, Member Secretary, CPCB
26. Shri Ajay Kumar Sharma, Member Secretary, UPPCB
27. Shri Vijai N., Member Secretary, Rajasthan SPCB
28. Shri Pradeep Kumar, Member Secretary, Haryana SPCB
29. Shri Rakesh Mishra, Deputy Secretary, MoPNG
30. Shri S.K. Takhele, CGM (Env), NTPC
31. Shri Shri Sudip Nag, ED & Mission Director, NTPC
32. Shri Ramesh Babu, Director (OP), NTPC
33. Shri Joginder Singh, Joint Director (AE), Dept. of Agriculture, Haryana
34. Shri P.K. Chauhan, Superintendent Engineer, DHBVN
35. Shri Mukesh Balodhi, Scientist 'D', MoEF&CC

**Steps taken by CPCB to combat air pollution in Delhi-NCR during the last 03 years**

1. CPCB during 2022 has come out with System and Procedure for Emission Compliance Testing of Retro-fit Emission Control Devices (RECD) for Diesel Power Generating Set Engines up to Gross Mechanical Power 800 kW. RECDs have been developed for DG sets of 209-799 kW capacity and installation of RECDs is in progress in Delhi-NCR. In order to control DG set emissions, CPCB is also funding retrofitment/ upgradation of DG sets in Govt. hospitals in Delhi-NCR and guidelines have been issued in this regard. Under the said guidelines, 100 % funding support is provided for RECD and dual fuel kit installation while 40% funding support is provided for procurement of new gas based Generator sets.
2. Guidelines/ mechanism for use of anti-smog guns in Construction and Demolition projects have been issued.
3. CPCB also provides one-time financial assistance to Municipal Corporations, Municipal Councils and ZillaParishads of the states of Punjab, Haryana, NCT of Delhi and NCR districts of Uttar Pradesh and Rajasthan, for establishing paddy straw based briquetting plants for use of briquettes for cremation purpose only.
4. Installation of VRS system at 3256 petrol pumps in Delhi-NCR in compliance with orders of Hon'ble Supreme Court and Hon'ble NGT.
5. Trial study of various new technologies for control of air pollution have been got conducted by CPCB out of which encouraging results were observed in case of Dust Suppressant for control of emissions at construction sites and road dust. Advisory have been issued for use of dust suppressant by road owning and construction agencies in Delhi-NCR.
6. CPCB has provided funds to Delhi-NCR Urban Local Bodies for procurement of Mechanical Road Sweepers, Anti-smog guns and also for road works and thereby tackle the issue of road dust.
7. CPCB on November 03, 2023 issued Directions under Section 5 of the Environment (Protection) Act, 1986 to Delhi-NCR SPCBs/ PCCs for strict implementation of actions prescribed under stages of GRAP invoked from time to time, in view of the deteriorated air quality situation in Delhi-NCR.