

GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE

RAJYA SABHA
STARRED QUESTION NO. 187
TO BE ANSWERED ON 12.12.2024

Impact of stubble burning on Delhi's air pollution

*187. SHRI MUZIBULLA KHAN:

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

- (a) whether stubble burning in neighboring States contributes significantly to air pollution in Delhi,
- (b) if so, the steps taken to address this issue in collaboration with the State Governments; and
- (c) the details of incentives provided to farmers for adopting alternative practices to stubble burning?

ANSWER

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

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

STATEMENT REFERRED TO IN REPLY TO PARA (a) TO (c) OF THE RAJYA SABHA STARRED QUESTION NO. 187 DUE FOR REPLY ON 12.12.2024 REGARDING IMPACT OF STUBBLE BURNING ON DELHI'S AIR POLLUTION RAISED BY SHRI MUZIBULLA KHAN, HON'BLE MEMBER OF PARLIAMENT

(a) to (c):

Air pollution in Delhi and NCR is a result of multiple factors including high level of anthropogenic activities in NCR, arising from various sectors viz. Vehicular Pollution, Industrial Pollution, Dust from Construction and Demolition activities, Road and Open Areas Dust, Biomass Burning, Municipal Solid Waste burning, and air pollution from dispersed sources, etc. During winter months, adverse meteorological conditions prevent dispersion of pollutants resulting in high pollution in the region. This is further aggravated due to the pollution from episodic events such as stubble burning.

Incidences of paddy stubble burning in the northern States of Punjab, Haryana, other areas in NCR are a matter of concern and impact the air quality in the NCR, particularly in the period between October and November.

As recorded through the standard ISRO protocol, the number of incidents of paddy stubble burning, have witnessed a significant decline in 2024 during paddy harvest season. Punjab & Haryana have recorded **87.7% & 80.2% reduction** in number of burning incidents in year 2024 as compared to year 2021. The details of paddy residue burning events during the period 15th September- 30th November, are as below:

Punjab		Haryana	
2021	2024	2021	2024
71,304	10,909	6987	1380

The Commission for Air Quality Management in National Capital Region and Adjoining Areas (CAQM) from time to time has appropriately communicated and issued directives & advisories to various stakeholders including the 11 Thermal Power Plants (TPPs) located within 300 km of Delhi, State Governments of Punjab, Haryana and Uttar Pradesh on “*Ex-Situ Stubble Management*” and to establish an ecosystem and robust supply chain mechanism to boost ex-situ utilization of straw for tackling the problem of stubble burning. CAQM has also directed coal based TPPs including co-generating Captive TPPs situated in NCR to initiate immediate steps to co-fire biomass-based pellets (with focus on paddy straw utilization) with coal through a continuous and uninterrupted supply chain targeting at least 5% co-firing of biomass pellets.

Further, as per revised model contract for use of biomass in TPPs, issued by Ministry of Power, these power plants shall use minimum 50% of raw material as stubble/ straw/crop residue of rice paddy sourced from Punjab, Haryana or NCR. 11 TPPs within 300 km radius of Delhi have co-fired 6.04 LMT till October, 2024 as compared to 2.58 LMT in FY 2023-24.

Ministry of Petroleum and Natural Gas (MoPNG) has launched a scheme to provide financial assistance to Compressed Bio-gas producers for procurement of biomass aggregation equipment for ex-situ management of paddy straw.

Further, Ministry of Agriculture & Farmers Welfare (MoA&FW) in 2018 launched scheme for providing subsidy for purchase of crop residue management (CRM) machinery and establishment of custom hiring centres (CHCs) in NCT of Delhi and the States of Punjab, Haryana and Uttar Pradesh for in-situ management of paddy straw.

Under this scheme, financial assistance @50% is provided to the farmers for purchase of crop residue management (CRM) machinery and @ 80% is provided to Rural Entrepreneurs (Rural youth & Farmer as an entrepreneur), Cooperative Societies of farmers, Registered Farmers Societies, FPOs and Panchayats for establishment of Custom Hiring Centres (CHCs) of CRM machines. Financial support of 65% up to a maximum of Rs. 1.50 Crore is also provided to paddy supply chain projects on the capital cost of machinery and equipment like higher HP Tractors, Cutters, Tedder, Medium to large Balers, Rakers, Loaders, Grabbers and Telehandlers.

The scheme promotes the usage of machines and equipment recommended by ICAR for management of crop residues such as Super Straw Management Systems, Happy Seeder, Super Seeder. Smart Seeder, Zero Till Seed cum Fertilizer Drill, Mulcher, Shrub Master/Rotary Slasher, Paddy Straw Chopper, Hydraulically Reversible Mould Board Plough, Crop Reapers and Reaper Binders for in-situ management of crop residue and Balers & Straw Rakes for collection of straw for further ex-situ utilization.

Financial assistance to the States and ICAR is also provided for undertaking Information, Education and Communication activities for mass awareness of farmers on crop residue management.

During the period from 2018 to 2024-25 (till 15.11.2024), an amount of Rs. 3623.45 crores have been released under this scheme (Punjab - Rs. 1681.45 crores, Haryana - Rs. 1081.71 crores, Uttar Pradesh - Rs. 763.67 crores, NCT of Delhi - Rs. 6.05 Crores and ICAR- Rs. 83.35 crores). The states have distributed more than 3.00 lakh machines to the individual farmers and to more than 40,000 CHCs in these 4 States, which also include more than 4500 Balers & Rakes which are used for collection of straw in the form of bales for further ex-situ utilization. MoA&FW in 2023 revised guidelines under the scheme to support establishment of crop residue/paddy straw supply chain, by providing financial assistance on the capital cost of machinery and equipment.

Based on the deliberations with State Governments and various stakeholders, CAQM has provided a Framework to the states concerned for control / elimination of crop residue burning and directed the State Governments to draw up detailed state-specific action plans based on the major contours of the framework. CAQM, vide Direction dated 12.04.2024, has also asked the States concerned for effective implementation of revised action plan for control / elimination of crop residue burning.

The Action Plans, inter-alia, comprises of following components: -

- i. In-situ Crop Residue Management:
 - a) Availability and allocation of CRM machinery
 - b) High yield and short duration paddy varieties, as substitute of PUSA- 44.
 - c) Harvesting schedule staggered to improve machine utilization
 - d) Super SMS mandated with Combine harvester
 - e) Extensive use of Bio-decomposer developed by IARI

ii. Ex-situ Crop Residue Management

Inter-Ministerial Committee (IMC) constituted on 18.12.2023 to regularly monitor the effective time bound implementation of the various schemes for management of paddy straw in a convergent and synergistic manner, had convened 9 meetings so far since December, 2023 till November, 2024 with the State Government of Punjab, Haryana, Uttar Pradesh & ther Stake Holder Ministries.

Central Pollution Control Board (CPCB) has framed Guidelines for grant of one-time financial support for establishment of pelletization and Torrefaction plants to promote utilisation of paddy straw. CPCB has sanctioned Rs. 14.5 Cr for 15 projects so far.
