

**COMMISSION FOR AIR QUALITY MANAGEMENT  
IN NATIONAL CAPITAL REGION AND ADJOINING AREAS**

**3<sup>rd</sup> Floor, Indian Oil Bhawan  
1, Sri Aurobindo Marg, Yusuf Sarai,  
New Delhi-110016**

---

F. No. A-110014/10/ 2020/CAQM-SB / 394-397

Dated: 10.06.2021

**SUBJECT: PROVIDING AN EFFECTIVE FRAMEWORK, ACTION PLAN AND STEPS TO  
BE TAKEN TO TACKLE THE PROBLEM OF STUBBLE BURNING.**

1. Whereas, it is an established fact that the stubble burning especially in the months of October- November is an issue of grave concern in view of its direct contribution to Air Quality degradation in National Capital Region and Adjoining Areas by increasing the concentration level of pollutants like Particulate Matter, Carbon dioxide (CO<sub>2</sub>), Carbon Monoxide (CO), Oxides of Sulphur (SO<sub>x</sub>) and Oxides of Nitrogen (NO<sub>x</sub>);
2. Whereas, Government of India, MoEF&CC, under the provisions of the Commission for Air Quality Management in National Capital Region and Adjoining Areas Ordinance 2021 (hereinafter referred to as Ordinance 2021) has constituted the Commission for Air Quality Management in NCR and Adjoining Areas (hereinafter referred to as Commission) vide Notification No. S.O. 1687 (E) dated 23<sup>rd</sup> April, 2021;
3. Whereas, Section 30 of the Ordinance 2021 provides that anything done or any action taken by the Commission under the Commission for Air Quality Management in National Capital Region and Adjoining Areas Ordinance 2020 (hereinafter referred to as Ordinance 2020) shall be deemed to have been done or taken under the corresponding

provisions of the Ordinance 2021;

4. Whereas, Section 12 of the Ordinance 2021 mandates the Commission to provide an effective framework, action plan and take appropriate steps to tackle the problem of stubble burning in the NCR and Adjoining Areas;
5. Whereas, the Commission has deliberated stubble burning/ Crop Residue Management (CRM) with major associated stakeholders in a series of meetings including with the State Governments of Punjab, Haryana, UP, Rajasthan, GNCTD, State Pollution Control Boards of NCR States, Punjab and Delhi Pollution Control Committee (DPCC), knowledge institutions like Indian Council of Agricultural Research (ICAR), Indian Agricultural Research Institute (IARI), Indian Space Research Organization (ISRO), NGOs and civil society groups etc. working in the National Capital Region;
6. Whereas the Commission has asked each of the NCR states and Punjab to draw up action plan for control/elimination of crop residue burning, *inter-alia*, based upon the discussions held/decisions taken in the Commission meetings and views communicated through letters;
7. Whereas, the action plan and/or the other inputs received from the state governments have been studied by the Commission;
8. Whereas, the Commission based upon the feedback, inputs and implementable action points emerged during the various meetings with stakeholders, has drawn up the following framework to control/eliminate stubble burning in order to improve the air quality in the National Capital Region and Adjoining Areas;
9. And therefore, the Commission in exercise of the powers conferred under the Ordinance 2021, directs the State Governments/GNCTD to formulate and implement suitable state specific detailed action plan,

based upon the local conditions and requirements, to control and eliminate stubble burning, broadly based on the following framework:

**10. Framework for control of Stubble burning in National Capital Region and Adjoining Areas :-**

- a) Background:- As per the Information provided by the Ministry of Agriculture and Farmers Welfare, the approximate area under rice cultivation in Punjab, Haryana, Uttar Pradesh and Rajasthan is 31,41,000 hectares, 15,59,000 hectares, 58,10,000 hectares and 2,19,000 hectares respectively. Paddy straw burning is widely practiced in Punjab, Haryana and Uttar Pradesh to clear the fields for next crop sowing, especially during October – November. The total paddy straw burning events reported by ICAR in the three States (Punjab, Haryana and Uttar Pradesh for the period 1<sup>st</sup> October to 30<sup>th</sup> November) during 2016-17, 2018-19, 2019-20 and 2020-21 were 1,27,774; 88,948; 75,563; 61,332 and 89,430 respectively. State Governments and Government of India have taken a number of steps to dissuade farmers from burning crop residue. Stubble burning especially in the months of October- November is an issue of serious concern in view of its direct contribution to Air Quality degradation in National Capital Region and Adjoining Areas as well as adverse impact on soil;
- b) There is a compelling necessity to eliminate this unsustainable agricultural practice and implement a comprehensive framework and action plan. The important components of the Framework and action plan for elimination of stubble burning are broadly as under: -
- A. In-situ / Crop Residue Management (CRM).**
  - B. Ex-situ Crop Residue Management (CRM).**
  - C. Prohibition of Stubble/Crop Residue Burning.**



**D. Effective monitoring/enforcement.**

**E. Plans / Schemes to reduce the generation of paddy straw.**

**F. IEC activities for the Plan of Action.**

**11. *In-situ* Crop Residue Management (CRM)**

In the *in-situ* Crop Residue Management practices, the harvested crop stalks/ stubbles are chopped into small pieces and incorporated *in-situ* into the soil to recycle the crop residue. In order to control crop residue/ stubble burning, a central sector scheme "on promotion of agricultural mechanization *in-situ* management of crop residue in State of Punjab, Haryana, Uttar Pradesh and NCT of Delhi" was approved by the Central Government. Funds amounting to Rs. 1726.67 crore were released during the last three years (2018-19, 2019-20 and 2020-21) under the scheme to the State of Punjab (Rs. 793.18 Crore), Haryana (Rs. 499.90 Crore), Uttar Pradesh (Rs. 374.08 Crore) and NCT of Delhi (Rs. 4.52 Crore). During the past three years 1,56,843 machines for crop residue management have been supplied. (Punjab – 71,410, Haryana – 51,049, Uttar Pradesh – 34,341 and NCT of Delhi - 43). In Punjab alone 50,815 CRM machines have been provided during 2018-19 and 2019-20 and the total machine count in Punjab has reached to 74,637 by December 2020 including the machines under Sub Mission on Agricultural Mechanization (SMAM).

**Targeted Activities under the action plan for *In-situ* crop residue management are as under: -**

- a) The State Governments to take full benefit of the centrally sponsored schemes to provide subsidy on agriculture equipment's and machinery used for various purposes to sufficiently augment the crop residue management machinery under Sub Mission on Agricultural Mechanization (SMAM) funded by Ministry of Agriculture and Farmers Welfare, Government of India.



- b) States to identify various need based, location specific interventions suitable to particular agro-ecological zones for management of crop residues and implement the same under the Annual Work Plan (AWP) of various ongoing schemes/programs/missions of ICAR. Besides, State Governments / UT to also avail financial assistance from Rashtriya Krishi Vikas Yojana (RKVY), which provides flexibility to the states for taking up any components/interventions required for holistic and integrated Government's development of agriculture including management of crop residue.
- c) Making machines available at the farmer's doorstep by: -
- (i) Village/Block/District wise mapping of the demand of CRM machinery.
  - (ii) Gap analysis as per the availability of CRM machines with each district of the state, to ensure that demand-supply mismatch at the level of village and individual farmer is identified and fixed.
  - (iii) Staggering the harvesting schedule at village level for ensuring better machine availability at the farmer's field.
  - (iv) Proper allocation of CRM machines (Super SMS, Happy Seeder, etc.) as per farmer's specific need, based on the staggered harvesting schedule, availability of machines with cooperatives and other agencies.
  - (v) Analysis of demand and supply of CRM machinery must be ensured and it should *inter-alia* include correlation analysis between district-wise fire count mapping and the number of machines deployed in a respective year. This will help to form a basis for the exact requirement, distribution and allocation of CRM machinery in future.

## Direction No. 8

- (vi) Ensuring focus on ideal mix of machines for an efficient crop residue management and economic viability, through a study entrusted to a competent Institution/organization.
- (vii) Focusing on Custom Hiring Centers (CHCs) and cooperatives to increase machine utilization through a program with specific machine utilization targets duly monitored. For this purpose, CHCs and Cooperatives be mandated to fill machine utilization data on an electronic platform decided by the State Government.
- (viii) Leveraging technologies to reduce friction in last mile delivery. In this regard, an electronic platform/ mobile application, as decided by the State Government, may be used/prepared to make available crop residue management machines /to allow farmers to book and use machines and an officer may be nominated for each Village for monitoring bookings on the platform and facilitating delivery of machines to the farmers.
- (ix) The State Government/UT to ensure that Small and Marginal farmers are provided a door step access (if possible, on free /concessional terms) to CRM machinery and straw baling equipment depending upon the residue management option chosen by them, as per local circumstances.
- d) State Governments to get assessment of village level non-Basmati crop acreage involving village pradhans and nodal officers/cluster officers and making on-line arrangement for access of crop residue management machinery along with accessories to the farmers from Custom Hiring Centers/Agriculture Service Centers. The on-line arrangement shall have the enabling provisions of automated SMS(s) to individual farmers for coordinating supply and access of crop residue management

- machinery with accessories;
- e) For effective in-situ management of crop residue, it is utmost essential that "Super SMS" is mandated to be used in combination with Combine Harvester and all new procurement of combine harvesters must be with the Super SMS attachment. This would facilitate minimizing the standing straw and better utilization of the chopped straw as mulch. Super SMS attachment also needs to be mandated to be retrofitted on the existing combine harvesters procured earlier without such an attachment.
  - f) The State Governments to ensure use of super seeder/happy seeder/ turbo seeder / shredder and zero-seed-cum-fertilizer drill etc. to facilitate *in-situ* management of crop residue and retaining the straw as surface mulching at the farmer's field;
  - g) The State Governments/ UT to promote and encourage use of crop residue as mulch for sowing of wheat and its incorporation in soil for planting of potato and other vegetable crops;
  - h) The State Governments / UT to encourage farmers to go for land preparation by using Hydraulic Reversible MB Plough that helps in upturning the crop stubbles and breaking the hardpan of the soil;
  - i) State Governments/ UT to note the available *In-situ* management of crop residue involving Bio-Decomposer technology options for decomposing the paddy straw by using Microbial Consortia and build possibilities to use bio-decomposer technologies, also in a complementary mode with CRM machines. ICAR has concluded that bio-decomposer can easily be blended with *in-situ* crop residue management machines and for effective *in-situ* decomposition after the spraying bio-decomposer, super seeder and rotavator can be operated for proper mixing of the residue in



## Direction No. 8

the soil and then a light irrigation is applied to ensure moisture in the fields.

- j) The State Government/UT to encourage farmers to collect and bundle crop residue using self-propelled Crop Reaper, Reaper Binders to place in the vicinity viz. in their own land/village common land/cattle ponds/Gaushalas etc. through suitable planning involving Panchayat Pradhans, village Nodal Officers, village revenue officials etc. under the supervision of the cluster officer. Such stacked rice paddy straw bales may be supplied to industries for Ex-situ management or treated with bio-decomposer as per laid down protocol to accelerate bio-decomposition and preparation of bio enriched compost/ vermin compost to be utilized as manure in the fields.
- k) The State Governments need to promote direct sowing of rice (DSR) method using short duration varieties in order to provide a longer window period for management of paddy straw. A staggered sowing/ transplantation schedule of various varieties of paddy also needs to be adopted on a village/ cluster basis, as advised by ICAR so as to optimally allocate the available CRM machinery for in-situ straw management.

### 12. **Ex-situ Crop Residue Management (CRM).**

Ex-situ crop residue management options have the potential to effectively utilize the agricultural residue/straw and add economic value, thereby minimizing the agricultural residue burning in and around NCR. Ex-situ options have been attempted both by the Government and private agencies. One of the important steps taken in this regard is by Public Sector Oil as well as Power Companies. Public sector oil companies are establishing bio-ethanol and compressed bio-gas plants.

For promoting such ex-situ crop residue management options, State Governments are required to:

- a) Develop a mechanism / policy for assured availability/supply of paddy straw material for various ex-situ projects in a time bound manner. It should include short term, medium term, and long-term actions in line with broad contours as below:
  - i. Map the districts and villages for the agricultural straw availability and demand from various industries (Biofuel projects, Thermal power projects, etc.) for optimum quantity allocation and utilization.
  - ii. Establish institutions / aggregators at Village/Block/District level with adequate and effective infrastructure that includes availability and deployment of CRM machinery at farmer's doorstep, storage of straw on and off-site, transportation of straw from the fields to the respective storage centers and from such centers to the industries.
  - iii. Develop appropriate decentralized mechanism for the collection, storage and transportation for industrial use of crop residue through empaneled aggregator agencies or through any other mechanism for tapping the real economic and commercial value of paddy residue.
  - iv. Develop a robust supply chain mechanism covering both supply side and demand side interventions and for ensuring quality of agricultural straw, primarily the moisture content in it.
  - v. Promote requisite infrastructure at the industrial sites for proper utilization of straw.
  - vi. Promote diversified ex-situ use of baled crop residue for various purposes like power generation, production of Bio-ethanol and Bio-gas, for making briquettes, torrefied charcoal, pellets, etc. as raw material/fuel for coal fired power plants etc.

## Direction No. 8

- vii. Facilitate the marketing of the agricultural straw-based products and services, so as to support the sustenance of the various ex-situ options.
  - b) To promote diversified ex-situ use of baled crop residue for various purposes like paper /board / panel/ packaging material making industries, composting, mushroom cultivation etc. through policy interventions;
  - c) To develop schemes to incentivize establishment of industries aiming at utilization of paddy straw as raw material by entitling them to all benefits as permissible under the fiscal incentives for industrial promotion schemes/programs in the respective States/UT;
  - d) To facilitate the transportation of paddy straw from surplus states to fodder deficit states through availing subsidy offered by Indian railways.

### **13. Prohibition of Stubble/Crop Residue Burning**

- a) National green Tribunal vide order dated 10.12.2015 in OA No.118 of 2013 has prohibited the burning of paddy straw and passed detailed directions including imposing environmental compensation against defaulters.
- b) The Hon'ble Supreme Court vide Order date 04.11.2019 had directed the State Governments of NCR including the entire police machinery, Gram Pradhan and Sarpanch to ensure that no stubble burning instances take place.
- c) The state/UT Governments /Pollution Control Boards/Committee in exercise of the powers conferred under section 19 (5) of the Air (Prevention & Control of Pollution) Act are to notify prohibition orders (in respect of States/UT where such order has not been issued) banning the burning of agriculture residue.
- d) The state/UT Governments are to issue Orders for imposing Environmental Compensation against the defaulters in compliance of



NGT directions and authorize and empower officers for this purpose for timely realization of the environmental compensation charges.

- e) District Magistrates have been passing orders under section 144 Cr PC in the past to prohibit burning of paddy straw. The state /UT Governments may ensure notification of such prohibition orders, banning the burning of agriculture residue, in respect of States/UT where such order has not been issued and ensure its implementation.
- f) Pass orders making it mandatory for all the Combines to have Super SMS system fixed (in respect of States/UT where such order has not been issued) in order to encourage *in-situ* management of paddy straw, under section 31-A of Air (Prevention and Control of Pollution) Act, 1981.

**14. Effective monitoring/enforcement: -**

To ensure full compliance of laws and Orders/Judgments of the Hon'ble Supreme Court of India/ NGT/High Court /State Government /SPCBs on the banning of stubble burning and take strict action against violators/defaulters, State Governments/GNCTD through its various Departments / Agencies/Board are to:

- a) Follow a standard protocol (under finalization by ISRO) for reporting of incidents of farm fires during the paddy harvesting season, strictly monitor incidents of burning of paddy straw through Remote Sensing Centre and ensure that SMS alert is sent to field functionaries to take immediate action on incidents of stubble burning.
- b) Make the mobile and web-based application operational in paddy season, in which role-based Login (Village Nodal, Cluster, Sub division / Tehsil, district and State level) are provided to various officials for end-to-end reporting

## Direction No. 8

including action taken for each fire incidents.

- c) Set up a Control Room for the purpose of controlling stubble burning during harvesting season.
- d) PCBs shall ensure that all data with respect to burning of crop residue as obtained from Remote Sensing authorities and action taken on the incidents and various MIS reports are available through a web-based application with facility to have dashboard to drill down data.
- e) Appoint/deploy Officers on area specific basis to ensure that ban orders on stubble burning are complied with, end-to-end reporting of each fire incidents and also to ensure that in cases of crop residue burning, appropriate coercive and punitive action is taken including registering FIRs/launching of prosecution under Section 15 of the Environment (Protection) Act of 1986 and other relevant laws. Monitoring of the matter is to be done at various levels as under:
  - A. State Level
  - B. District Level Officer
  - C. Sub Division/Tehsil Officer
  - D. Cluster Officer
  - E. Village Nodal Officer
- f) Ensure that police authorities enforce and implement various directions and orders issued with respect to ban on burning of crop residue. The police shall particularly render special assistance to the District Administration for monitoring of hot spots where large scale incidents of burning of crop residue have been observed in previous years.
- g) Make liable the land owners and /or contract farmers (data

bank of contract farmers shall also be prepared) for any violation of the orders of ban on stubble burning.

- h) Contact and sensitize farmers who have given their land on contract to ensure compliance of the orders/directions on the ban on stubble/crop residue burning.
- i) Ensure that the Commission Agents, *Nambardaar*, Panchayat Members, Lease holders of the Panchayat Land or Shamlat Land of the villages, employees of Government Departments, Boards, Corporations and Autonomous Bodies will not burn crop residue. Strict action including suitable disciplinary action shall be taken against the employees for violation of ban on burning of crop residue
- j) Ensure that patwaris enter the *girdawri* register, or similar such records as prevalent in various states, with a red ink entry against the fields/farm owners where from the incidents of burning of crop residue have been reported. A system of penal measures and / or disincentives needs to be built-in and enforced for every violators/such red ink entry cases. The disincentives may include withholding of concessions of electricity charges, water charges, fertilizers etc.
- k) Identify vacant common village land or any other land for storage of paddy straw throughout the state.
- l) The Deputy Commissioner and SSPs of the district shall jointly hold District Level Monitoring meeting with all the stakeholders to strictly enforce the orders banning paddy stubble burning.
- m) Appoint one nodal officer for each village and one Cluster Officer for every 20 villages (or as per the need) to coordinate the efforts from the pool of employees available with various



## Direction No. 8

departments.

- n) Ensure appointments of various officials like Village Nodal officer, Revenue officer (Patwari), Cluster officer, Tehsildar, Police and SDM to monitor the stubble burning incidents. It may also be ensured that the information about such key officials is available in an appropriate technology platform, to be coordinated by a suitable government agency, in advance of the harvesting season.
  - o) Ensure visit to hot spots (villages where more than 75% area of the village burnt since last three year as per the stubble burning data) by senior officers of the Districts and make special arrangements to contain the burning of crop residues in these villages.
  - p) Ensure that nodal officer visits every site of the incident immediately, but definitely within two days to assess the situation and take appropriate action.
  - q) Monitor the progress of various Stakeholder Departments and send the consolidated progress reports to the Department of Environment on Email. Consolidated reports shall be sent to the Chief Secretary and Commission.
  - r) Ensure Implementation and Monitoring Mechanism by mobilization and effective coordination of the efforts of various Departments/Boards/ agencies of the State and by setting up mechanism at State Level, District Level, Sub-division Level as well as by appointing Cluster Officers and Village Nodal Officers.
- A. State Level Coordination and Monitoring: -
- (i) At the State Level, a Committee under Chief Secretary and comprising of the Administrative Secretaries of all the concerned

and relevant Departments will coordinate, monitor and decide various issues to ensure effective implementation of the ban on burning paddy straw:

- (ii) The State Government will depute Administrative Secretaries to various districts to monitor the implementation of the ban. They will be assisted by adequate number of Senior Officers;
- B. District Level Coordination and Monitoring: - There shall be a District Level Monitoring Committee under the chairmanship of Deputy Commissioner and comprising Senior Superintendent of Police, Chief Agriculture Officer and heads of various departments concerned. District Level Coordination and Monitoring Committee shall meet frequently and review the IEC activities, enforcement activities and other facilitation activities and take necessary action.
- C. Sub-Division Level Coordination and Monitoring: - There shall be a Sub-Division Level Monitoring Committee with Sub-Divisional Magistrate as Chairman consisting of Deputy Superintendent of Police and other concerned officers as Members. The Committee shall meet daily/ alternate day and review the progress of various activities and take necessary action.
- D. Cluster Officer: - Cluster officer will fill the data regarding challan number and date, challan amount and challan photo in the mobile base app and shall coordinate with Village Nodal Officer for various activities to control burning of stubble by the farmers
- E. Village Nodal Officer: - Nodal officer deployed in each Village will assist in bookings of CRM on the electronic platform/ mobile application and ensuring delivery of machines to the farmers. The Village nodal officer will get the information for each fire

## Direction No. 8

incidents in his area from the SMS alert system already in operation. The village Nodal officer will visit the spot in the field, operate the mobile app and make entries along with picture of the fire incident sites in the mobile app. The Village Nodal officer will assist in various facilitation and enforcement activities at village level such as creation of awareness in village, identify those farmers who are likely to put fire to paddy residue to convince them not to burn, take action against farmers who have burnt the residue, report incidence of crop burning etc.

### 15. Plans / Schemes to reduce the generation of paddy straw: -

State Governments should take focused action to: -

- a) Promote Basmati variety also considering the fact that area under basmati variety has gone down significantly in some states.
- b) Discourage (and totally suspend) use of PUSA 44 variety of Paddy seeds and stop certification of its seeds so that non-Basmati acreage would be encouraged to shift to short duration rice varieties.
- c) Promote short duration and early maturing varieties since they can be managed quite efficiently and provide a much wider window for paddy straw management. Ministry of Agriculture and Farmers Welfare, Government of India has specifically recommended various short duration paddy varieties which are well suited to replace long duration varieties. The commission has also reiterated the need for the same and taken up with state Governments accordingly.
- d) Ensure adoption of short duration and early maturing varieties quickly in various paddy growing areas. Short duration varieties



have been well adopted by the farmers in some districts in Punjab but in many other districts the adoption is slow and sizeable area is under the long duration varieties.

- e) Promote crop diversification. Crop diversification program is being implemented in Punjab, Haryana and Uttar Pradesh as a sub-scheme of RKVV since 2013-14 to divert the area of water guzzling paddy to alternate crops. Though, various interventions like alternate crop demonstrations, farm mechanization and value addition, site specific activities and awareness training etc. are carried out under the crop diversification program, there is a compelling need to give a major boost to crop diversification.
- f) Identify crops that could compete with paddy-wheat crop cycle and provide remunerative and assured price to the farmers to substantially minimize the stubble generation from paddy. The possible options for the region may *inter-alia* include orchard with drip irrigation, vegetables, corn/maize, cotton, pulses and oil seeds etc. which consume less water, less power and also less fertilizers.

State Governments should work out an exhaustive policy framework on crop diversification, based on the experiences gained in implementation of Crop diversification program and seek appropriate assistance and support from Ministry of Agriculture and Farmers Welfare, Government of India.

**16. IEC activities for the plan of Action: -**

- a) Undertake detailed IEC activities and awareness programs about various measures to prevent crop residue burning through electronic media, social media and print media as well as publications, seminars and other available means etc. much

## Direction No. 8

before the beginning of harvesting season.

- b) Design and implement suitable location specific capacity building and targeted awareness modules and programs about ill effects of crop residue burning and its effective utilization and management.
- c) Notify district wise IEC campaign schedule through restructured CRM activities with full engagement and synergy by all the related departments, State Agricultural University, Gramin Krishi Mela's, District KVKs, Public/Private Institutes, Village Agriculture volunteers, Sarpanches, Experts/Farmer Unions and all active NGOs.
- d) Print and Multi- media advertisement may, *inter-alia*, include Jingles on Radio Channels, Production of Advertisement Films, Running of short films on TV Channels, Display Boards against straw burning including on State Roadways / SRTC Buses, Display Boards on Bus Stands, Market Committee Yards and Cooperative Societies in the State, Painting of walls in the villages with slogans against Paddy burning, Massive print media advertisement, Erection of hoardings and panels at prominent places, Plying publicity vans in the villages, Deputing of Nodal officer for each village, Distributing Pamphlets and leaflets to farmers etc.
- e) Involve students to communicate effectively the adverse effects of stubble burning and availability of management options.
- f) Support farmers by organizing bio-decomposer application requirements through guidance by IEC partners and extending help from block/village level agriculture machinery by designated Nodal Officers.

- g) Build strong Advocacy Campaign Modules during 2021 and thereafter so as to popularize advantages of Microbial Consortia Technology.
  - h) Organize field level training programs at KVKs and other similar notified locations viz. Kisan Mela's/Field Agriculture Extension Centres/ Agriculture University campuses etc. for efficient and effective use of farm machinery to facilitate collection, volume reduction, and transportation.
  - i) Organize Gram Sabha's for demonstrating crop residue resource conservation and management machinery on a large scale by the State Department of Agriculture and other Government Institutions.
  - j) Impart regular training to Agriculture and Line Departments, Call Centers and other technical staff working for the purpose of crop residue management by State Agriculture and Horticulture Universities.
  - k) Support NGOs working for management of paddy residue by Department of Agriculture and other relevant Government Department/ agencies by extending possible support for positive interventions by these NGOs at field level.
- 17.** A detailed/comprehensive plan of action, based on the contours of the frame-work as above, with clearly entrusted responsibilities to various Departments/Boards/ agencies of the State and other stakeholders needs to be immediately finalised by each of the state governments/GNCTD, duly identifying various qualitative and quantitative parameters and the respective targets against each of them, along with the time frame of implementation. The plan should



**Direction No. 8**

endeavour to completely eliminate the practice of stubble burning and its consequential adverse effects on air quality. The plan of action shall be submitted by the respective states to the Commission by 30<sup>th</sup> June, 2021, progress on which shall be closely monitored by the Commission.

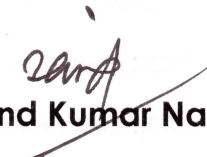
  
**(Arvind Kumar Nautiyal)**  
**Member Secretary**  
**Tel No.: 011-20861974**  
**Email: arvind.nautiyal@gov.in**

To:

The Chief Secretary, Government of Rajasthan

Copy to:

1. The Principal Secretary, Environment Department, Government of Rajasthan
2. The Principal Secretary, Agriculture, Government of Rajasthan
3. The Chairman, Central Pollution Control Board
4. The Member Secretary, Rajasthan State Pollution Control Board

  
**(Arvind Kumar Nautiyal)**