

BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL, NEW DELHI

Original Application No. 632 of 2023

In the matter of Suo Moto Cognizance

In Re: News Item published in The Hindu dated 06.10.2023 titled "**Pollution takes a front seat as Stubble Fires Spike in Punjab**"

Submission of Time Bound Action Plan for Control of Burning of Paddy Crop Residue on behalf of the State of Punjab in compliance to order dated 29.11.2023.

RESPECTFULLY SHOWETH

1. That the Hon'ble National Green Tribunal has taken Suo Motto Cognizance of a News Item published in The Hindu dated 06.10.2023 titled "**Pollution takes a front seat as Stubble Fires Spike in Punjab**" and issued notice to the State of Punjab through its Chief Secretary, Ministry of Environment, Forest and Climate Change through its Secretary and the Director Commission for Air Quality Management. The Hon'ble Tribunal after consideration of the matter has passed orders dated 06.10.2023, 08.11.2023 and 20.11.2023 in compliance of which the State of Punjab through Member Secretary, Punjab Pollution Control Board has filed status reports.
2. That the Hon'ble National Green Tribunal was pleased to pass a further order dated 29.11.2023 there by directing the State of Punjab and Haryana to prepare a time bound Action Plan disclosing phase wise proposed action from 01.01.2024 to 01.09.2024 which may include various preventive steps for the next year as also the accountable authorities for implementation of the same.
3. That the order dated 29.11.2023 passed by the Hon'ble Tribunal has been examined and in accordance with the directions given by Hon'ble Tribunal, the phase wise action plan of the State of Punjab, has been prepared after incorporating inputs / data received from various stake holder departments.



4. That the phase wise Action Plan for Control of Burning of paddy crop residue in the State of Punjab for the year 2024 is enclosed herewith as **Annexure-A** (page no. 1 to 17) for kind perusal and consideration of the Hon'ble Tribunal.

Submitted by

Date: 11/01/2024

Place: Patiala


(Gurindar Singh Majithia)
Member Secretary,
Punjab Pollution Control Board,
Patiala
Member Secretary
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(On behalf of the State of Punjab)

**Phase wise Action Plan for
Control of Burning
of
Paddy Crop Residue in the State of Punjab**



**For the year
2024
(Govt. of Punjab)**

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**Member Secretary
Punjab Pollution Control Board
PATIALA**

Member Secretary
Punjab Pollution Control Board
PATIALA

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**Member Secretary
Punjab Pollution Control Board
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Member Secretary
Punjab Pollution Control Board
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1.0 Introduction

The Hon'ble National Green Tribunal has taken suo moto cognizance in OA no. 632 of 2023 in regard to News item appearing in Hindu dated 06.10.2023 "**Pollution takes a front seat as stubble fires spike in Punjab**". The Tribunal from 20.10.2023 had regularly monitored the farm fire incidents in the State of Punjab & Haryana and had issued the direction to regulate and control the same. During the course of hearing of above case on 29.11.2023, the Hon'ble NGT deliberated following points

- *As per the report produced by the Commission for Air Quality Management there were 36,632 farm fire incident in Punjab, 2285 in Haryana and 39129 in the entire area of NCR region including Punjab and Haryana between the period from 15.09.2023 to 28.11.2023.*
- *It has not been disputed that the issue of paddy residue burning arises mainly between the period 15th September to 30th November. As per the report now the incidents of paddy residue burning in Punjab and Haryana have reduced. On 28.11.2023, 18 incidents of paddy residue burning were noticed in Punjab and no incident was noted in Haryana.*
- *Serious problem of residue burning arises every year, therefore, for the next year i.e. 2024 a comprehensive plan and remedial action needs to start at this stage itself. During the course of arguments various suggestions have come up like sensitizing the cultivators, preparation of data base of farm owners and their mobile number, preparation of a catalog of suggestions and examination of feasibility and consideration of implementation of the suggestions by an expert committee and also involving farmers union, scientists and engineers in that process, restricting the use of harvesters and exploring the methods for cutting paddy from the bottom/roots.*

The Tribunal vide its order dated 29.11.2023 has issued following directions:-

To prevent such issue and mitigate the situation next year i.e. 2024, we direct the State of Punjab and Haryana, to prepare a time bound action plan disclosing phase-wise proposed action from 01.01.2024 to 01.09.2024 which may include various preventive steps for the next year as also the accountable authorities for implementation of the same. Counsel for the Punjab has submitted that such an action plan will be prepared and submitted before the Tribunal within six weeks



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2.0 Background

Punjab is an agricultural state with wheat and rice as major crops. The wheat straw is used as fodder by the animal, whereas, the use of paddy straw is limited. Paddy was cultivated in 31 lakh hectare area (2023) in Punjab resulting in generation of about 19.55 million tons of paddy straw. The details of area under paddy sown in the State of Punjab during Kharif season viz-a-viz paddy straw generation are as under:

Year	Area under Paddy (Lac ha)	Area under Non-Basmati (Lac ha)	Area under Basmati (Lac ha)	Paddy Straw Generation (Million Ton)		
				From Area under Non-Basmati @ 6.5 T / ha	From Area under Basmati @ 5.5 T / ha	Total Paddy Straw Generation
2022	31.67	26.73	4.94	17.37	2.71	20.08
2023	31.00	25.00	6.00	16.25	3.30	19.55
2024 (Est)			*			19.58**
	* The actual figures shall be determined later, ** As per experiences of past years, approx. 19.58 Million Tons of paddy straw shall be generated					

2.1 The State has taken many initiatives to control practice of paddy residue burning by in-situ management during the last 5 years with details as under:

- i) Sustaining/ diversifying area from paddy to other crops (since paddy-wheat rotation has proved to be the most economical and mechanized rotation in the State than all other crop rotations such as cotton-wheat, maize-wheat which have many issues and do not compete with the paddy-wheat rotation hence State faces a major challenge in diversification).
- ii) Implementation of “**Central Sector Scheme for Promotion of Agricultural Mechanization for In-situ Management of Crop Residue**”. The scheme is being implemented in the state since 2018-19.

2.2 The efforts are being made to use the paddy straw for various industrial and energy generation projects. It is targeted that in 2024, the state shall be able to manage almost the entire 19.58 million tons of Paddy straw for different purposes as per following details:

S.No	Activity	Consumption of paddy straw Million Ton/ year
1	In-Situ management	11.5
2	Ex-Situ management	5.08
3	Crop divarication	3.0
	Total	19.58 Million Tons

3.0 Roles and Responsibilities of various departments

Various Departments and authorities of the State shall take the following actions to control the burning of crop residue:

S. No.	Department	Roles and Responsibilities	Period
1.	Department of Agriculture	<ul style="list-style-type: none"> • IEC Campaign • Mapping of CRM Machinery • Achieving optimum utilization of CRMs • Compensation to Farmers. • Promotion of diversification and staggered sowing of Paddy. • Hot Spot Management • Ensuring Super SMS on combine Harvester. • Setting up of Control Rooms • Fixing Responsibility of KVKs, BISA & IFFCO • Regular Training & NGO involvement • Mobile App.(I-khet) for Crop Residue Management 	The activities shall be started from 01.01.2024 and shall continue till 30.11.2024. Proposed month-wise detail of IEC activities is given at point 5.0.
2.	Department of Rural Development and Panchayats	<ul style="list-style-type: none"> • To ensure that all the members of Panchayat do not burn crop residue. • To create awareness among farmers and ensure usage of machines in the village through Village Panchayats. • To identify vacant common village land for storage of paddy straw for future use through their officers and provide cumulative data to the Deputy Commissioner. 	The activities shall be started from 01.01.2024 and shall continue till 30.11.2024. Proposed month-wise detail of IEC activities is given at point 5.0.
3.	Department of	<ul style="list-style-type: none"> • To ensure that members of co- 	The activities shall be started from

	Cooperation	<p>operative societies do not burn crop residue and action shall be taken against the members violating the ban of crop residue.</p> <ul style="list-style-type: none"> • Deployment of officers on area specific basis 	01.01.2024 and shall continue till 30.11.2024. Proposed month-wise detail of IEC activities is given at point 5.0.
4.	Department of Power	<ul style="list-style-type: none"> • To ensure that the coal based Thermal Power plants situated up to a radius of 300 Km of Delhi shall take immediate steps to co-fire biomass-based Pellets, Torrefied Pellets/Briquettes (with focus on paddy straw) with Coal (up to 5-10%) in the power plants • To ensure a continuous and uninterrupted supply Chain and take all necessary steps to ensure that co-firing of biomass pellets in Thermal Power Plants. 	The activities shall be started from 01.01.2024 and shall continue till 30.11.2024. Proposed month-wise detail of IEC activities is given at point 5.0.
5.	Department of New and Renewable Energy	<ul style="list-style-type: none"> • To promote use of paddy straw as fuel in the Bio Mass Power Plants and Compressed Bio Gas (CBG) plants and take all necessary steps including the policy interventions for promoting the establishment of such plants. • To establish the Supply Chain and Aggregator Entities for making available the paddy straw for such usages throughout the year. • To undertake District wise gap analysis regarding the availability of paddy straw and its ex-situ usage for energy and industrial purposes. • To earmark the District/Tehsil wise 	The activities shall be started from 01.01.2024 and shall continue till 30.11.2024. Proposed month-wise detail of IEC activities is given at point 5.0.

		<p>areas for ensuring proper allotment of agricultural paddy straw based on the demand of the Biomass/CBG plants as well as industries.</p>	
6.	Punjab Pollution Control Board	<ul style="list-style-type: none"> • To ensure monitoring of incidents of burning of paddy straw through Punjab Remote Sensing Centre and ensure SMS alert is sent to field functionaries to take action on incidents of stubble burning. • To ensure that mobile and web based application be made operational in paddy season, in which role based Login (Village Nodal, Cluster, Sub division/Tehsil and district level) be provided to various officials for end to end reporting and action taken for each fire incidents. • To ensure that the mobile based application for both Android and IOS platform is made operational by 15th September 2023. • To encourage boiler-based industries to adopt paddy-based boilers or co-fire paddy in existing boilers and install new paddy straw based boilers. • To facilitate setting up of pelletization plants for delivering co-firing mandates in Thermal power 	<ul style="list-style-type: none"> • PPCB has engaged PRSC for monitoring of fire incidents and the same shall start by 15th Sept 2024 and mobile and web based application shall be made operational by 15th Sept. • 20.69 Lacs tonne of paddy straw already been used by industries.

		plants and brick kilns.	<p>PPCB is regularly conducting campaigns to encourage the industries to install paddy straw based boilers.</p> <p>Similarly, PPCB is regularly conducting campaigns to encourage the promotion of palletization plants. A Special Nodal Office has been designated to make entrepreneurs aware regarding one time subsidy scheme of CPCB and to facilitate them with the legal framework to avail the subsidy. 5.64 Lacs tonne of paddy straw is being consumed by the palletization plants which was nearly negligible before a couple of years.</p>
7.	Department of Personnel	<ul style="list-style-type: none"> To ensure suitable directions to all the State Government Departments, Boards, Corporations and Autonomous Bodies to direct their employees not to burn crop residue and suitable disciplinary action shall be taken against the employees for violation of ban on burning of crop residue 	May, 2024 onwards
8.	Department of School Education	<ul style="list-style-type: none"> To educate students on the adverse effects of stubble burning on human and soil health and availability of management options 	From now till 30.11.2024
9.	Directorate of Information and Public Relations	<ul style="list-style-type: none"> To work closely with the Dept. of Agriculture to disseminate information to the print and electronic media regarding the management of crop residue via in-situ and ex-situ mechanism. 	Details given in 5.0
10.	Department of Revenue & Rehabilitation.	<ul style="list-style-type: none"> Recovery of pending Environmental Compensation To ensure the recovery of 	October, November and December, 2024

		<p>Environmental Compensation imposed on the defaulting farmers in time.</p> <ul style="list-style-type: none"> • Red Entry in KhasraGirdawari • IEC campaigns at village level 	
11.	District Administration	<ul style="list-style-type: none"> • Appointment of Nodal officers in the District. • To Ensure visits to hot spots (villages where more than 75% area of the village burnt since last three years 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. • To keep a record of district wise data of in-situ, ex-situ management of paddy straw. • Micro campaigns at district and block levels to promote extensive utilization of paddy straw • To Ensure that the information of various officials like Village Nodal officer, Revenue officer (Patwari), Cluster officer, Tehsildar, Police and SDM be provided to PPCB in advance stage before the beginning of stubble burning so that log in id of various officials be entered into PRSC system. • To Monitor the progress of various Stakeholder Department & send the consolidated progress report to the Department of Environment 	May, 2024 onwards

		<ul style="list-style-type: none">• To ensure that all the officers operate the mobile based app.• To Ensure optimal utilization of machinery provided for in-situ management of the crop residue.	
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4.0 Proposed Components

S.No.	Activity	Concerned Department	Plan to achieve phase wise targets (from 01.01.2024 to 30.09.2024)
In-situ Management			
1.	Crop residue management machinery provision	Dept. of Agriculture / Chief Agriculture Officer of respective District.	<ul style="list-style-type: none"> The subsidy/financial assistance for procurement of various CRM machines is provided under Central Sector Scheme Promotion of Agricultural Mechanization for In-situ Management of Crop residue. For the financial year 2024-25, the scheme is likely to be implemented on SMAM funding pattern (60:40).
2.	Village / Block / District wise mapping of the demand of CRM machinery	Dept. of Agriculture / Chief Agriculture Officer of respective District	Continuous Process
3.	GAP analysis, the availability of CRM machines with each District of the State	Dept. of Agriculture / Chief Agriculture Officer of respective District	Continuous Process
4.	Allocation and optimum utilization of CRM machinery (Super SMS, Happy Seederetc)	Dept. of Agriculture / Chief Agriculture Officer of respective District	Allocation of CRM will be done as per the demand from respective Deputy Commissioners.

5.	Custom Hiring Centres (Cooperative) to increase machine utilization	Registrar of Co-operative Societies.	<p>1. Special campaign would be launched to increase the usage of machines available in CHC's.</p> <p>2. Cooperative Department to be advised to incentivize the CHCs in PACS for increasing utilization</p>
6.	Door step access of CRM to small and marginal farmers	Dept. of Agriculture / Chief Agriculture Officer of respective District	<p>1. The I-Khet Machine mobile application will provide information of available machinery to the farmers. The farmers would be able to hire the machine through the app.</p> <p>2. The CHCs would be instructed to charge only operational costs from small and marginal farmers.</p> <p>3. Through the village level camps individual farmers would be motivated to adopt online booking of CRM machinery through I-Khet.</p> <p>4. All Group- A officers of Department of Agriculture will be directed to adopt CHCs each to increase the utilization of machines.</p> <p>5. The department has purchased CRM machines at block level in almost all the blocks of the state. The machines would be made available to the small/marginal farmers of the state.</p>
7.	Activities for covering area through Bio-Decomposer Application	Dept. of Agriculture / Chief Agriculture Officer of respective District	<p>1. 7500 acres to be managed through Bio-Decomposer Application in the State of Punjab</p> <p>2. Area to be covered by M/s Nurture Farms in 2024 to be finalized yet.</p>
8.	Devising schemes for diversification from paddy.	Dept. of Agriculture / Chief Agriculture Officer of respective District	Continuous Process

9.	Schemes to encourage Direct Seeding of Rice (DSR).	Dept. of Agriculture / Chief Agriculture Officer of respective District	Continuous Process
10.	Encourage short duration paddy varieties to replace long duration Pusa-44 variety of paddy.	Dept. of Agriculture / Chief Agriculture Officer of respective District	Continuous Process
Ex-situ Management			
1.	Utilization in Biomass Power plants	PEDA /Dept. of Agriculture / District	11 Bio mass power plants already operational utilizing 1 Million Tonnes of paddy straw 3 lakh tonnes already being utilized in CBG plants PEDA is actively promoting Biomass power and CBG Projects in the State under NRSE Policy-2012 of Government of Punjab. -All options are being explored and encouraged. -Number of Balers/Rakes will be increased in the event of Start of Operation /working of Additional Bio Mass Units and the availability of funds from Gol As above
2.	Utilization in CBG plants	PEDA /Dept. of Agriculture /	
3.	Utilization in Thermal power Plants	Department of Power	Tenders issued by all TPPs for procurement of torrefied palletes
4.	Utilization in Industrial Boilers	PPCB/ Dept. of Industries	20.69 Lacs tonne of paddy straw already been used by industries. PPCB is regularly conducting campaigns to encourage the industries to install paddy straw based boilers. The target mentioned in the state action plan submitted to CAQM has already been achieved. A number of new industries are coming up and existing industries are also upgrading their industrial boilers based on paddy straw.

5.	Utilization in Bioethanol Plants	PEDA	Upcoming plant by HPCL at Bathinda which shall use 1.0 Lakh MT of paddy straw A plant by M/S Rana Sugars already operational
6.	Setting up of palletization Plants	PPCB	5.64 Lac Tonnes already being utilized by palletization plants across the State. PPCB is regularly conducting campaigns to encourage the promotion of palletization plants. A Special Nodal Office has been designated to make entrepreneurs aware regarding one time subsidy scheme of CPCB and to facilitate them with the legal framework to avail the subsidy. 5.64 Lac tonne of paddy straw is being consumed by the palletization plants which was nearly negligible last year
7.	Utilization in Brick Kilns (In Lakh MT)	PPCB	PPCB has executed several meetings with the Brick Kiln Owners to use paddy straw. Policy already notified making it compulsory for all BKO's to mandatorily co-fire paddy straw based pallets. Action being taken against BKO's who are not complying with the notification. Presently, matter has been stayed by Hon'ble High Court and efforts are on to get the stay vacated.



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5.0 IEC Activities

IEC Activities (Phase Wise Plan for year 2024)

	January	February	March	April	May	June	July	August	September
1.	255	288	300	320	335	360	370	390	400
2.	70000	72000	73000	75000	80000	85000	90000	90000	90000
3.									
4.	100	120	135	138	140	155	160	180	180
5.	850	900	925	940	950	1050	1100	1200	1200

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6.0 Data base regarding contact details of farmers.

All the Deputy Commissioners shall ensure that data base including contact numbers of all the farmers is available with them and shall upload the same as per format below:

Sr. No.	Name of District	Name of the Block	Web link for blockwise contact details of farmers
1	AMRITSAR	1. 2. 3.	
2	BARNALA	1. 2. 3.	
3	BATHINDA	1. 2. 3.	
4	FATEHGARH SAHIB	1. 2. 3.	
5	FARIDKOT	1. 2. 3.	
6	FAZILKA	1. 2. 3.	
7	FIROZPUR	1. 2. 3.	
8	GURDASPUR	1. 2. 3.	
9	HOSHIARPUR	1. 2. 3.	
10	JALANDHAR	1. 2. 3.	
11	KAPURTHALA	1. 2. 3.	
12	LUDHIANA	1. 2. 3.	

13	MANSA	1. 2. 3.	
14	MOGA	1. 2. 3.	
15	MUKTSAR	1. 2. 3.	
16	SBS NAGAR	1. 2. 3.	
17	PATHANKOT	1. 2. 3.	
18	PATIALA	1. 2. 3.	
19	RUPNAGAR	1. 2. 3.	
20	S.A.S. NAGAR	1. 2. 3.	
21	SANGRUR	1. 2. 3.	
22	TARN TARAN	1. 2. 3.	
23	MALERKOTLA*	1. 2. 3.	
TOTAL			


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7.0 Conclusion

Upon implementation of the aforesaid detailed crop residue management plan, the below given targets are expected to be achieved in phase wise manner:

Sr. No.	Strategy	Cumulative management in Paddy Straw (Million Tons)			
		2021	2022	2023	2024
1.	Crop Diversification	2.57	3.57	4.570	3.0
2.	In-situ Management	6.45	8.13	9.44	11.50
3.	Ex-situ Management	0.92	1.21	1.51	5.08
	Total	9.94	12.91	15.52	19.58


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