

Action Plan
For
Control of Burning of Crop Residue
In the
State of Punjab



May, 2022
(Latest)
Govt. of Punjab

Table of Contents

1.0 Introduction.....	2
2.0 Background.....	3
3.0 Prohibition on Burning of Crop Residue.....	5
4.0 Directions to various Departments and Authorities.....	7
5.0 Governance Mechanism	13
6.0 State Level Coordination and Monitoring	13
7.0 District Level Coordination and Monitoring	14
8.0 Sub-Division Level Coordination and Monitoring	14
9.0 Village Nodal Officer	15
10.0 Cluster Officer	16
11.0 Crop Residue Management Plan	17
12.0 Summary of Paddy Straw Management.....	27
13.0 Awareness and Enforcement Measures	27
14.0 Reporting Formats.....	27
Annexure-1	28
Annexure-2	29
Annexure-3	30
Annexure-4	31
Annexure-5.....	32

1.0 Introduction

The Government of India, MoEF&CC, under the provisions of the Commission for Air Quality Management in National Capital Region and Adjoining Areas Act 2021 has constituted the "Commission for Air Quality Management in NCR and Adjoining Areas. The Section 12 of the Act 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.

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. The Commission based upon the feedback, inputs and implementable action points emerged during the various meetings with stakeholders, has drawn up framework to control/eliminate stubble burning in order to improve the air quality in the National Capital Region and Adjoining Areas.

The Commission has issued directions to the State Government vide no. A-10011/10/2020/CAQM-SB/384-387 dated 10.6.2021 to the State Government to prepare a detailed / comprehensive plan of action based on the contours of the framework, with clearly entrusted responsibilities to various Departments / Boards and other stakeholders, duly identifying various qualitative and quantitative parameters and the respective targets against each of them, alongwith the time frame of implementation and submit the same to Commission by 30.06.2021. The plan was submitted to the Commission and the Commission has further directed to submit the updated plan by 20.5.2022

The components of the Framework and action plan for elimination of stubble burning are broadly classified as under:

- | | |
|------------------------------------------------------------|------------------------------------------------------------|
| a. In-situ / Crop Residue Management (CRM) | (Deptt. of Agriculture) |
| b. Ex-situ Crop Residue Management (CRM) | (Deptt. of Renewable Energy / PEDDA/ Deptt. of Industries) |
| c. Prohibition of Stubble/Crop Residue Burning | (Deptt. of Environment) |
| d. Effective monitoring/enforcement | (Deptt. of Environment) |
| e. Plans / Schemes to reduce the generation of paddy straw | (Deptt. of Agriculture) |
| f. IEC activities for the Plan of Action | (Deptt. of Agriculture) |

Accordingly, the action plan for control of crop residue burning in the State of Punjab has been prepared.

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 is cultivated in 29.61 lakh hectare area (2021) in Punjab resulting in generation of about 18.74 million tons of paddy straw. The details of area under paddy sown in the State of Punjab during Kharif 2020 viz-a-viz paddy straw generation areas 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
2020	31.49	27.43	4.06	17.82	2.23	20.05
2021	29.61	24.72	4.89	16.07	2.69	18.74

2.1 The State has taken many initiatives to control practice of paddy residue burning during last 3 years with details as under:

- (i) Sustaining/ diversifying area from paddy to other crops. Paddy-wheat rotation has proved to be the most economical rotation in the State and all other crop rotations such as cotton-wheat, maize-wheat have many issues and do not compete with the paddy-wheat rotation. State has still maintained area under cotton and maize despite this challenge.
- (ii) Implementation of **“Central Sector Scheme for Promotion of Agricultural Mechanization for In-situ Management of Crop Residue”** for the Year 2018-19, 2019-20 & 2020-21. Subsidy has been provided @ 50% to individual farmers and @ 80% to groups and cooperative societies for procurement of machinery for in-situ/ex-situ management of paddy straw under the Central Sector Scheme of Govt. of India as well as under the Center State Sharing Scheme (Sub Mission on Agricultural Mechanization). Under these Schemes, 76,626 CRM Machines have been provided to the farmers and 19,836 custom hiring centers have been established/ strengthened with details as under:

Sr. No.	Year	Funds Received (Rs. in Crores)	No. of CRM Machines Provided	No. of CHCs established/ strengthened
1.	2018-19	269.38	27747	3888
2.	2019-20	273.80	23068	5140*
3.	2020-21	272.50	25811	10808
4.	2021-22	290.87	13796	3073
	Total	1106.55	90422	13881

- (iii) The State has also been able to collect and store paddy residue in Collection

Centers by Biomass Industries; cattle ponds;Gaushalas and other common lands available in the villages for use as cattle feed for the landless farmers within the State as well as outside the State.

- 2.2 The efforts are being made to use the paddy straw for various industrial and energy generation projects. It is estimated that about 10 million tons of Paddy straw is being used for different purposes as per following details:

S. No	Activity	Consumption of paddy straw Million Ton/year
1	Paddy straw being used in 10 Biomass Power Projects of capacity 91.50 MW	0.82
2	Paddy straw being used in paper / Cardboard mills	0.10
3	Paddy residue from basmati/ other paddy varieties fit for animal consumption as fodder and other usages.	2.57
4	Paddy residue being managed through different available straw management system including machinery/ equipment.This method results in better soil health and improved productivity of paddy and wheat by 10% after 3 years	6.47
	Total	9.96Million Tons say 10 Million Tons (50% of total paddy straw generation)

- 2.3 Since only part of paddy straw is currently managed, the indiscriminate burning of left- over paddy and straw/ stubble in open fields in the State causes widespread pollution resulting in various kinds of environmental problems, huge nutritional loss of soil and health related problems. There is still need to take wide ranging measures to create awareness about the ill effects of burning of paddy as well as strictly enforcing various measures for control of burning of crop residue in the State.

3.0 Prohibition on Burning of Crop Residue

3.1 Orders dated 22/10/2013 by Department of Science, Technology and Environment, Govt. of Punjab

To curb the menace of stubble burning during post-harvesting season in the State, the Government of Punjab, Department of Science, Technology and Environment in exercise of the powers conferred under section 19(5) of the Air (Prevention & Control of Pollution) Act, 1981 in consultation with the Punjab Pollution Control Board vide notification no. 946 dated 22/10/2013 has prohibited the burning of agriculture residue in the State of Punjab.

Any violation of this notification is punishable under section 39 of the Air (Prevention & Control of Pollution) Act, 1981 by filing a criminal complaint in the court of Judicial Magistrate first class.

3.2 Order dated 10.12.2015 passed by National Green Tribunal (NGT)

NGT has vide order dated 10.12.2015 in OA no.118 of 2013 prohibited the burning of paddy straw and passed detailed directions to meet the challenges arising from the burning of paddy straw.

It also provides imposing environmental compensation against defaulter.

“Any person or body that is found offending this direction would be liable to pay environmental compensation as follows:

- (i) Small land holders having an area less than 2 Acres shall pay Environmental Compensation of Rs. 2500/- per incidence.*
- (ii) Land holders having land area more than 2 Acres but Less than 5 Acres shall pay Environmental Compensation of Rs. 5000/- per incidence.*
- (iii) Land holders having land area more than 5 Acres shall pay Environmental Compensation of Rs. 15000/- per incidence.”*

Further, violation of ban order passed by NGT is also punishable under the relevant section of NGT Act, 2010.

3.3 Order dated 7.2.2018 passed by Punjab Pollution Control Board regarding mandatory Super SMS with Combine Harvester

In order to encourage in-situ management of paddy straw, Punjab Pollution Control Board has passed order dated 7.2.2018 under section 31-A of Air (Prevention and Control of Pollution) Act, 1981 making it mandatory for all the Combines to have Super SMS system fixed.

Any violation of this direction is punishable under section 37 of the Air (Prevention & Control of Pollution) Act, 1981 by filing a criminal complaint in the court of Judicial Magistrate first class.

3.4 Order dated 25.09.2020 passed by Punjab Pollution Control Board regarding imposing Environmental Compensation against the defaulters in compliance of NGT directions

The Punjab Pollution Control Board authorized and empowered SDMs, Circle Revenue Officers (Tehsildars and NaibTehsildars), Chief Agriculture officers, Agricultural Development Officers and Secretary, Regional Transport Authorities to act against the persons found indulging in the burning paddy stubble and/ or operating Harvester Combines without Super SMS by imposing Environmental Compensation in accordance with NGT directions passed vide order dated 10.12.2015 and in violation of PPCB directions dated 07.02.2018 and prosecution in violation of State Government Notification dated 22.10.2013.

3.5 Prohibitory orders under section 144 CrPC by DistrictMagistrates

District Magistrates in the State pass orders under section 144 CrPC every season to prohibit burning of paddy straw.

Any violation of the order passed u/s 144 of CrPC is punishable u/s 188 of CrPC.

4.0 Directions to various Departments and Authorities

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

4.1 Department of Agriculture

(i) IEC Activities

The Department of Agriculture will lead & coordinate various IEC activities to create massive awareness campaign in collaboration with Department of Information and Public Relation, PAU Ludhiana and other stakeholders against the burning of paddy straw. IEC Activities will include the following:

- (a) Jingles on Radio Channels
- (b) Production of Advertisement Films
- (c) Running of films on TV Channels
- (d) Display Boards against straw burning on backside of Punjab Roadways and PRTC Buses
- (e) Display Boards on Bus Stands, Market Committee Yards and all Cooperative Societies in the State
- (f) Painting of walls in the villages with slogans against Paddy burning
- (g) Massive print media advertisement
- (h) Hoardings and Panels at prominent places
- (i) Publicity Vans in the villages
- (j) Rally by School children in last days of September and middle of October
- (k) Deputing of Nodal officer for each village.
- (l) Pamphlets and leaflets to farmers

(ii) Provision of Machinery to individual farmers and groups

- (a) The Department will provide subsidy for purchase of agriculture machinery for paddy straw to individuals as well as groups and agriculture cooperative societies and ensure that the same are widely utilized. Subsidy will be disbursed through online system within 7 days of physical verification of machines through online system only to avoid the delay.

The State requires intervention of the Commission for taking up the issue with the Ministry of Agriculture & FW, GoI, for providing Paddy Straw Management Compensation to farmers @ Rs.100/- per Quintal of Paddy produced at least for three years by the time the industry for alternate use

of paddy straw becomes fully operational.

(b) Promotion of diversification and staggered sowing of Paddy.

The Department of Agriculture would take steps to diversify from paddy to other crops to reduce the amount of straw generated in the state. State would actively try to provide MSP for alternate crops to paddy. Along with diversification, staggered sowing of paddy would be promoted to popularize short term duration varieties of paddy.

(iii) Responsibility of Commission Agents

The Department of Agriculture will ensure that the Commission Agents (Artiahs) registered with agriculture produce Market Committees in Punjab will not burn crop residue. Actions shall be taken against the Commission Agents for violation of ban on burning of crop residue.

(iv) Responsibility for uses of basmati residue.

The Department of Agriculture will ensure that basmati residue shall be used as fodder and find out avenues for uses in fodder consuming Districts and other States along with transportation.

(v) Sensitize farmers.

Farmers who have given their land on contract shall be contacted on phone to sensitize them to ensure non burning of paddy straw on their land.

(vi) Hot Spot Management

Department of Agriculture shall identify hot spot with the help of PRSC and appoint their officers on Block level basis for sensitizing the farmers of the area and making available the crop residue management machinery on a priority basis along with focused IEC activity.

(vii) Ensuring Super SMS on combine Harvester.

Department of Agriculture shall carry out an exercise for ensuring Super SMS on Combine Harvesters through individual level contact with the combine owners as well as manufactures starting from 1st weeks of September.

(viii) Setting up of Control Room

Punjab Mandi Board shall set up a Control Room for the purpose of controlling stubble burning during Kharif harvesting season.

(ix) Responsibility of KVKs, BISA & IFFCO

All the KVKs shall adopt at least 10 villages (surrounding hot spots) and shall be responsible for providing In-situ Machinery and ensuring zero burning in

such villages. Similarly, BISA should adopt 100 villages (hot spots) and also IFFCO should adopt 100 villages and should take responsibility of zero burning in these villages.

(x) Regular Training & NGO involvement

PAU shall impart regular training to Agriculture and Line Departments, Call Centers and other technical staff working for the purpose of crop residue management.

NGOs working for management of paddy residue will be supported by Department of Agriculture and positive interventions should be made by these NGOs at field level.

(xi) Registration of Custom Hiring Centers

The Department shall associate with the teams of Ministry of Agriculture, Govt. of India for registration of Custom Hiring Centers on the Mobile App., "CHC Farm Machinery".

(xii) Mobile App. for Crop Residue Management

The Department shall prepare suitable Mobile App. for making crop residue management equipment available on rental on Uber/Ola Model. Further, it will ensure data uploading on mobile app. named "Cooperative Machinery Tracker" and the usage of machinery from all CHCs. The information on use of machinery shall remain available on the dashboard.

4.2 Department of Revenue & Rehabilitation.

(i) Entry in Khasra Girdawari

The Department of Revenue shall ensure that patwaris enter the *girdawari* register with red ink as 'ਝੋਨਾ ਸਾੜਾ' against the fields where incidents of burning of crop residue have been reported.

(ii) Nambardars

The Department shall ensure that no *Nambardar* burns crop residue. The Department shall ensure action against *Nambardar* violating ban on burning of crop residue.

(iii) Recovery of Environmental Compensation

The Department shall ensure the recovery of Environmental Compensation imposed on the defaulting farmers in time.

4.3 Department of Rural Development and Panchayats

- (i) The Department shall ensure that all the members of Panchayat do not burn crop residue. The Department shall take necessary action against the members

of Panchayat who violate the order regarding ban on burning of crop residue.

- (ii) The Department shall create awareness among farmers and ensure usage of machines in the village through Village Panchayats.
- (iii) The Department shall identify vacant common village land for storage of paddy straw for future use through their officers and provide cumulative data to the Deputy Commissioner.
- (iv) Officers of the Department shall be deployed on area specific basis for ensuring no stubble burning and taking action against the defaulters.

4.4 Department of Cooperation

- (i) The Department shall ensure that members of co-operative societies do not burn crop residue and action shall be taken against the members violating the ban of crop residue.
- (ii) The Department shall create awareness among farmers and ensure usage of machines in the village through Village Panchayats.
- (iii) Officers of the Department shall be deployed on area specific basis for ensuring usage of crop residue machinery, no stubble burning and taking action against the defaulters.

4.5 Department of Power

The Department of Power to ensure all JEs of Power Department are monitoring the incidents of burning in their respective jurisdiction and reporting them to the district administration for necessary action.

The Department of Power shall 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 through a continuous and uninterrupted supply Chain and take all necessary steps to ensure that co-firing of biomass pellets in Thermal Power Plants begins without any delay which is in compliance to the Direction no. 42 given by the Commission

4.6 Department of New and Renewable Energy

The Department of New and Renewable Energy shall endeavor to use 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.

PEDA shall also establish the Supply Chain and Aggregator Entities for making available the paddy straw for such usages throughout the year. PEDA shall also undertake District wise gap analysis regarding the availability of paddy straw and its ex-situ usage for energy and industrial purposes.

PEDA shall earmark the District/Tehsil wise areas for ensuring proper allotment of agricultural paddy straw based on the demand of the Biomass/CBG plants as well as industries.

4.7 Punjab Pollution Control Board

- (i) PPCB shall 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.
- (ii) PPCB shall 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.
- (iii) PPCB shall ensure that the mobile based application for both Android and IOS platform is made operational by 15th September 2022.
- (iv) PPCB shall ensure that Proper training is imparted to all the field functionaries for smooth operation of the mobile based application.
- (v) PPCB 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.
- (vi) The Board shall ensure that in cases of persistent defaulters of crop residue burning, appropriate coercive and punitive action is taken including launching of prosecution under Section 15 of the Act of 1986.
- (vii) Monitor the ambient air quality of the major cities and make the data available to district authorities and the State to ensure further action in case of deterioration of quality.

4.8 Department of School Education

The Department of School Education shall ensure that employees of all the Government & private schools in Punjab do not burn crop residue. Suitable action shall be taken against the employees who are violating the ban on burning of crop residue. Department shall educate students on the adverse effects of stubble burning on human and soil health and availability of management options

4.9 Department of Home Affairs

The Department of Home Affairs to ensure that necessary assistance is rendered by the police authorities for enforcement and implementation of various directions and orders issued with respect to ban on burning of crop residue. The police shall particularly render assistance to the District Administration for monitoring of hotspots where large scale incidents of burning of crop residue in previous years.

4.10 Department of Personnel

The Department of Personnel shall 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. Department of Defense Services Welfare will ensure to not burn paddy stubble themselves, educate others and report incidents.

4.11 District Administration

- (i) Appointment of Nodal officers in the District.

Deputy Commissioner of the respective district shall appoint following area specific officials drawn from Department of Agriculture & Farmers Welfare, Cooperative Department, Rural and Panchayat Department, Power Department, Soil and Water Conservation Department, PPCB for end to end reporting and action taken for each fire incidents as under:

- (a) Village Nodal Officer.
- (b) Cluster Officer
- (c) Sub Division/Tehsil Officer.
- (d) District level Officer.

The list along with designation & mobile nos. shall be provided to PPCB by 15th August, so as to create the login in the Mobile Application.

- (ii) 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.
- (iii) Appoint one nodal officer for each village and one Cluster Officer for every 20 villages to coordinate the efforts from the pool of employees available with various departments.
- (iv) Ensure appointments of various officials like Village Nodal officer, Revenue officer (Patwari), Cluster officer, Tehsildar, Police and SDM to monitor the stubble burning incidents.
- (v) 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.
- (vi) 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.

- (vii) It shall be ensured that nodal officer visits every site of the incident within two days and environment compensation shall be imposed as per directions of NGT by the designated officer of the District Administration.
- (viii) Monitor the progress of various Stakeholder Department & send the consolidated progress report to the Department of Environment on email stubble burning progress report@pbdecc.gov.in so as to consolidated report be sent to the Chief Secretary and other State and Central functionaries.
- (ix) Ensure no burning of crop residue by specialcategories:
 - (a) Lease holders of the Panchayat Land or Shamlat Land of thevillages
 - (b) Government employees
 - (c) Commission agents
 - (d) Panchayat Members
 - (e) Other such category of cultivators
- (x) Ensure that all the officers operate the mobile based app.
- (xi) Ensure optimal utilization of machinery provided for in-situ management of the crop residue.

5.0 Governance Mechanism

The campaign of this nature will require mobilization and effective coordination of efforts of various departments in the State. The entire program will be governed through the following mechanism:

- (i) State LevelCoordination
- (ii) District LevelCoordination
- (iii) Sub-division LevelCoordination
- (iv) Cluster Officer
- (v) Village NodalOfficer

6.0 State Level Coordination and Monitoring

- (i) At the State Level, a Committee under Chief Secretary and comprising of the Administrative Secretaries of the following Departments will coordinate, monitoranddecidevariousissuestowardseffectiveimplementationoftheban on burning paddystraw:
 - (a) Department ofAgriculture

- (b) Department of Science, Technology and Environment
- (c) Department of Cooperation
- (d) Department of Rural Development
- (e) Department of Power
- (f) Department of Water Resources
- (g) Department of Defence Services Welfare
- (h) Department of Information and Public Relations
- (ii) The State Government will further depute senior Administrative Secretaries in various districts to monitor the implementation of the ban. They will be assisted by Senior Officers from PPCB, PSPCL and Agriculture.
- (iii) Chief Secretary will also review the progress with the Deputy Commissioners through VC.

7.0 District Level Coordination and Monitoring

- (i) District Administration will have the key role in effective implementation of the plan. All the Departments at the district level will have to extend their support.
- (ii) There will be a District Level Monitoring Committee, which shall consist of the following officers:

(a) Deputy Commissioner	-	Chairman
(b) Senior Superintendent of Police	-	Member
(c) Additional Deputy Commissioner (D)	-	Member
(d) EE / AEE, PPCB	-	Member
(e) District Revenue Officer	-	Member
(f) Chief Agriculture Officer	-	Convener
- (iii) The District Level Committee will meet on weekly basis or more frequently and review the IEC activities, enforcement activities and other facilitation activities and take necessary action.

8.0 Sub-Division Level Coordination and Monitoring

- (i) The Sub-Division Level Monitoring Committee shall consist of the following officers:

(a) Sub-Divisional Magistrate	-	Chairman
(b) Deputy Superintendent of Police	-	Member

- (c) BDPO - Member
- (d) Agriculture Officer - Convener
- (ii) The sub-division level committee will meet daily/ alternate day and review the progress of various activities and take necessary action.

9.0 Village Nodal Officer

- (i) The Village nodal officer will get the information for each fire 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 alongwith picture of the fire incident sites in the mobile app.
- (ii) The Village Nodal Officers will be drawn from amongst the officials such as Secretaries of Cooperative Societies, Panchayat Secretaries, JE/ Linemen of PSPCL, officials of Agriculture/ Horticulture and Soil conservation, Guardians of Governance etc.
- (iii) The Village Nodal officer will assist in various facilitation and enforcement activities at village level such as:
 - (a) To help create awareness in village by way of holding meetings with farmers.
 - (b) To help arrange CRM machines, if possible, in village.
 - (c) To distribute pamphlets/ leaflets etc. in village.
 - (d) To make announcements in Gurdwaras or by other modes.
 - (e) To interact with village schools for organizing rallies and awareness lectures to students so that these students can further create awareness of their parents.
 - (f) To identify those farmers who are likely to put fire to paddy residue and to convince them by way of one to one contact.
 - (g) To get to know the farmers who have burnt the residue and to ask the revenue Patwari of the village to make relevant entry in Revenue records, as per separate instructions issued by Revenue Department.
 - (h) To get to know the land of employees of Govt./ board/ corporation/ coop societies and also the panchayat lands and to implement govt. instructions regarding not putting fire to residue in such lands.
 - (i) To report incidence of crop burning to the higher authorities

10.0 ClusterOfficer

- (i) Cluster officer will fill the data regarding challan no & date, challan amount and challan photo in the mobile base app.
- (ii) The Cluster officers will be drawn from the block / sub-division level officers of various departments such as Agriculture, Revenue, Cooperation, Rural Development, PSPCL, Defense Welfare etc.
 - (iii) Cluster Officer shall coordinate with Village Nodal Officer for various activities to control burning of stubble by the farmers.

11.0 Crop Residue Management Plan

Sr. No.	Target activity	Present status (baseline data as on 31.03.2022)	Future targets			Timelines for achievement of targets			Responsible agency / Officers responsible	Remarks																					
			2022-23	2023-24	2024-25	2022-23	2023-24	2024-25																							
a) In-situ / Crop Residue Management (CRM)																															
1.	Crop residue management machinery under Crop Residue Management Scheme / Submission on Agriculture Mechanization (CRM / SMAM)	90422	25000	30000	30000	30.11.2022	30.11.2023	30.11.2024	Dept. of Agriculture / Chief Agriculture Officer of respective District.	1. The subsidy/financial assistance will be provided as per the guidelines of Central Sector Scheme Promotion of Agricultural Mechanization for In-situ Management of Crop residue. 2. The Subsidy for CRM machines is being provided through a online portal developed for this purpose only.																					
2.	Village / Block / District wise mapping of the demand of CRM machinery	1,55,562	25000	30000	30000	30.11.2022	30.11.2023	30.11.2024	Dept. of Agriculture / Chief Agriculture Officer of respective District	<div>The number of pending applications on the portal are as follows:<div>(Nos)<table><tr><td>Category</td><td>Pending Application</td><td>Pending Machine</td></tr><tr><td>Ind. Farmer</td><td>26932</td><td>63232</td></tr><tr><td>Co-op Societies</td><td>205</td><td>1280</td></tr><tr><td>FPO</td><td>650</td><td>4372</td></tr><tr><td>Panchayat</td><td>64</td><td>602</td></tr><tr><td>Reg. Farmer Groups</td><td>12161</td><td>86076</td></tr><tr><td>TOTAL</td><td>40012</td><td>155562</td></tr></table></div><div>At the time of submission of application, farmers applied for more number of machines, but the machines procured were lesser than the sanctioned.</div></div>	Category	Pending Application	Pending Machine	Ind. Farmer	26932	63232	Co-op Societies	205	1280	FPO	650	4372	Panchayat	64	602	Reg. Farmer Groups	12161	86076	TOTAL	40012	155562
Category	Pending Application	Pending Machine																													
Ind. Farmer	26932	63232																													
Co-op Societies	205	1280																													
FPO	650	4372																													
Panchayat	64	602																													
Reg. Farmer Groups	12161	86076																													
TOTAL	40012	155562																													
3.	GAP analysis, the availability of CRM machines with each District of the State	Additional Sheet Attached.							Dept. of Agriculture / Chief Agriculture Officer of respective District	1. Gap analysis has been done by the Department along with A-PAG/IPS Foundation on the basis of existing Crop Residue Management Machinery. 2. Efforts would be made to provide CRM																					

										machinery on priority to the blocks as per GAP analysis.																										
4.	Staggering of the harvesting schedule at the village level / Cumulative Area sown – In lakh Ha								Dept. of Agriculture / Chief Agriculture Officer of respective District	1. Different varieties of paddy sown by farmers have different maturing period. Almost all the varieties sown in the state are harvested from 25 September to 15 November. 2. Staggering of harvest at village level is not possible as the harvesting apart from physiology of the crop is dependent upon various factors such as local weather, availability of combines etc.																										
5.	Allocation of CRM machinery (Super SMS; Happy Seederetc.)— Number of Machines	<table><tr><td>Machine</td><td>Available (Nos)</td></tr><tr><td>Super SMS</td><td>5972</td></tr><tr><td>H.Seeder</td><td>13540</td></tr><tr><td>S. Seeder</td><td>26305</td></tr><tr><td>ZTD</td><td>16109</td></tr><tr><td>Baler and Rakes</td><td>541</td></tr><tr><td>Straw Chopper</td><td>7767</td></tr><tr><td>RMB Plough</td><td>8125</td></tr><tr><td>Mulcher</td><td>6235</td></tr><tr><td>Rotary Slasher/ S.Master</td><td>1987</td></tr><tr><td>Rotavator</td><td>3835</td></tr><tr><td>Reaper</td><td>6</td></tr><tr><td>Total</td><td>90422</td></tr></table>	Machine	Available (Nos)	Super SMS	5972	H.Seeder	13540	S. Seeder	26305	ZTD	16109	Baler and Rakes	541	Straw Chopper	7767	RMB Plough	8125	Mulcher	6235	Rotary Slasher/ S.Master	1987	Rotavator	3835	Reaper	6	Total	90422							Dept. of Agriculture / Chief Agriculture Officer of respective District	
Machine	Available (Nos)																																			
Super SMS	5972																																			
H.Seeder	13540																																			
S. Seeder	26305																																			
ZTD	16109																																			
Baler and Rakes	541																																			
Straw Chopper	7767																																			
RMB Plough	8125																																			
Mulcher	6235																																			
Rotary Slasher/ S.Master	1987																																			
Rotavator	3835																																			
Reaper	6																																			
Total	90422																																			
6.	Custom Hiring Centres (Cooperative) to increase machine utilization — Increase	Initial Targets for 35 ha for Custom Hiring Centre*.	+10%	+15%	+25%	30.11.2022	30.11.2023	30.11.2024	Registrar of Co-operative Societies.	1. Special campaign would be launched to increase the usage of machines available in CHC's.																										

	in Utilization (%)									2. Cooperative Department to be advised to incentivize the CHCs in PACS for increasing utilization
7.	Development of electronic platform / mobile application for allowing farmers to book and use CRM – Status	I-Khet App , Mobile application for booking and use of CRM machinery has been developed.	-	-	-	-	-	-	Dept. of Agriculture / Chief Agriculture Officer of respective District	-
8.	Door step access of CRM to small and marginal farmers – Report in terms of Number of Machines made available.	<ul style="list-style-type: none"> 42475 machines are registered on I-Khet. I-khet Punjab app installation during the season- 26600 	60000	65000	70000	30.11.2022	30.11.2023	30.11.2024	Dept. of Agriculture / Chief Agriculture Officer of respective District	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 . 2. The CHCs would be instructed to charge only operational costs from small and marginal farmers. 3. Through the village level camps individual farmers would be motivated to adopt online booking of CRM machinery through I-Khet. 4. All Group- A officers of Dept of Agriculture have been directed to adopt one CHC each to increase the utilization of machines.
9.	Use of crop residue as mulch for sowing of wheat and its incorporation in soil for planting of vegetable crops— In Lakh Ha	Mulch -4.25 lakh ha with Happy Seeders and - Incorporation- For Vegetables 1.0 lakh ha For Wheat 5 lakh ha	4.0 1.01 7	6 1.03 7.5	7 1.05 8.5	30.11.2022	30.11.2023	30.11.2024	Dept. of Agriculture / Chief Agriculture Officer of respective District	1. Farmers are being informed about the advantages of In-situ crop residue management practices especially mulching and the benefit of incorporating the residue in soil for good soil health. 2. Department of Horticulture would be involved in this activity.
10.	Direct sowing of rice (DSR) method using short duration varieties in order to	6.01 lakh Ha	12	12	12	30.06.2022	30.06.2023	30.06.2024	Dept. of Agriculture / Chief Agriculture Officer of respective District	Incentive of Rs. 1500/- to be provided to farmers for promoting Direct Sowing of Rice.

	provide a longer window period for management of paddy straw—In lakh ha									
b) Ex-situ Crop Residue Management (CRM)										
1.	Promotion of ex-situ crop residue management options,	1. 9 +1 Bio Mass Power Plants under Operation 2. Dept. of Agric. provided Assistance during 2017-18 to 2020-21 for - 549 Balers and 493 Rakes	- - 500 +400	-800 +600	-1000 +800	30.11.2021	30.11.2022	30.11.2023	PEDA /Dept. of Agriculture / Chief Agriculture Officer of respective District	- PEDA is actively promoting 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 GoI
2.	Mapping the districts and villages for the agricultural straw availability and demand from various industries (Bio-fuel projects, Thermal power projects, etc.) for optimum quantity allocation and utilization.	- 10 Bio Mass Power Plants under Operation with area mapping based on availability of paddy / other crop residue and high incidences of burning through PEDDA .	N.A	N.A	N.A				PEDA/ Dept. of Agriculture	i. Mapping has been done by PEDDA for additional projects based on the existing ones and availability of paddy residue. These units need support in terms of Viability Gap Funding and hybrid power arrangement. ii. Department of Agriculture will assist the efforts.
3.	Establish institutions / aggregators at Village/Block/District level		wef 1/08/2021						PEDA/Dept. Of Rural Development / Dept. of Agriculture	1. Will be taken up with Dept. of Rural Development and Panchayats 2. DoAFW officials will advise the aggregators and villagers to cooperate in the Districts.
4.	Developing		wef						PEDA/Dept. Of Rural	In the process through Industry and Biomass

	appropriate decentralized mechanism for the collection, storage and transportation for industrial use of crop residue		1/08/2021						Dev. & Panchayats / Dept. of Agriculture	Aggregators.
5.	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.		wef 1/08/2021						PEDA/ Dept. of Agriculture	DoAFW officials will advise the aggregators and villagers to cooperate in the Districts.
6.	Promoting the use of paddy straw for industrial purposes (in MT/Annum)	305900	350000	420000	500000	31.3.2022	31.3.2023	31.3.2024	PPCB	
7.	Mapping of the districts and villages for agriculture straw availability and demand from the industries		w.e.f. 1/11/2021						PEDA/ Dept. of Agriculture/PPCB	<ul style="list-style-type: none"> Mapping has been done by PEDA for projects based on the availability of paddy residue. <p>Punjab Pollution Control Board shall provide necessary data to PEDA regarding the quantum of paddy straw being used by the industries.</p>
8.	Development of scheme to incentivize establishment of industries aiming at utilization of paddy		Will be taken up on Merit.						PEDA/Horticulture Department / Dept. of Agriculture	<p>Department of Horticulture will be assisted for providing incentives under Agriculture Infrastructure Fund (AIF) and setting up of such units.</p> <p>. DoAFW officials will advise the aggregators</p>

	straw as raw material									/ business entrepreneurs to set up such units especially in the Hot Spot Districts.
c) Plans / Schemes to reduce the generation of paddy straw										
1.	Promoting basmati variety of rice. -- Lakh ha	4.38	5.5	6.00	6.80	30.09.2022	30.09.2023	30.09.2024	Dept. of Agriculture / Chief Agriculture Officer of respective District	Basmati Development Board is being considered to be setup in the state to promote basmati and facilitate the export of basmati. An alternatively it is being explored in PAGREXC.
2.	Suspending use of PUSA 44 variety--in terms of area -- lakh ha	4.82	3.20	2.15	1.40	30.06.2022	30.06.2023	30.06.2024	Dept. of Agriculture / Chief Agriculture Officer of respective District	<ul style="list-style-type: none"> PUSA 44 Seed has been withdrawn from the seed chain by GOI. Seeds (foundation/breeder/TL) wont be available to the farmers for sowing. Efforts are being made to reduce the area under PUSA 44 which will lead to lesser generation of paddy straw.
3.	Use of short duration and early maturing paddy varieties- lakh ha	15	16.5	18	19	30.06.2022	30.06.2023	30.06.2024	Dept. of Agriculture / Chief Agriculture Officer of respective District	<ul style="list-style-type: none"> Department of Agriculture will exert all out efforts to bring down area from paddy to other crops. The Department is promoting cultivation of Moong crop. As moong will be harvested in month of June so the farmers sowing moong will have to opt for shorter duration varieties of paddy. Department is promoting the cultivation of short duration varieties of paddy for DSR.
4.	Promotion of crop diversification- lakh ha	6.21	7.30	8.00	9.00	30.11.2022	30.11.2023	30.11.2024	Dept. of Agriculture / Chief Agriculture Officer of respective	<ul style="list-style-type: none"> Increase area under Cotton from 3 Lakh Ha to 4 Lakh ha and maize from

									District	1 Lakh Ha to 1.6 Lakh Ha.
5.	Identification and encouraging cultivation of alternate crops such as vegetables, corn/maize, cotton, pulses and oil seeds.- lakh ha	Maize: 1. Cotton :3 Vegetable Crops: 1 other crops (Sugarcane, oil seed and plantation etc: 2.21							Dept. of Agriculture / Chief Agriculture Officer of respective District /Department of Horticulture	As above in point 4
d)IEC Activities for the Plan of Action										
			Future targets			Timelines for achievement of targets 2022-23				
Sr. No.	Target activity	Present status (baseline data as on 31.03.2022)	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25	Responsible agency / Officers responsible	Plan for Kharif 2022
1.	Awareness programs through print media, electronic media and social media	3738	4000	4000*	4000*	31.03.2022	31.03.2023	31.03.2024	Dept. of Agriculture / Chief Agriculture Officer of respective District	for ensuing kharif season 23- district level camp 145- block level camps 3000- village level training camps will be organized.
2.	Implementation of suitable location specific capacity building and target awareness modules.	50	66	66	66	31.03.2022	31.03.2023	31.03.2024	Dept. of Agriculture / Chief Agriculture Officer of respective District	District Level Camps – 23 Block level Camps- 145
3.	District wise IEC campaign with full engagement of all related departments	4	6	6	6	31.03.2023	31.03.2024	31.03.2025	Dept. of Agriculture / Chief Agriculture Officer of respective District	The campaign will be organized along with the District Administration and allied departments.

4.	Awareness through running of short films on T.V. channels	7	10	10	10	31.03.2023	31.03.2024	31.03.2025	Dept. of Agriculture / Chief Agriculture Officer of respective District	50 programme on TV/ Doordarshan 50 programme on All India Radio 2 articles per week in news papers (for ensuing season)
5.	Involvement of students to communicate effectively the adverse effects of stubble burning	200	2000	4000	6000	31.03.2023	31.03.2024	31.03.2025	Dept. of Agriculture / Chief Agriculture Officer of respective District	Campaign to be carried out in 3 Schools in each block
6.	Supporting farmers by organizing bio-decomposer application requirements through guidance by IEC partners.	460 Hectares	1000	2000	4000	31.03.2023	31.03.2024	31.03.2025	Dept. of Agriculture / Chief Agriculture Officer of respective District	<ul style="list-style-type: none"> The trials of bio-decomposers results are not very encouraging. Trials will be again conducted at PAU, Ludhiana during ensuing Kharif 2022
7.	Popularization of advantages of Microbial Consortia Technology	460	1000	2000	4000	31.03.2023	31.03.2024	31.03.2025	Dept. of Agriculture / Chief Agriculture Officer of respective District	Dissemination of technology through Awareness activities will be organised after recommendation by PAU.
8.	Organization of field level training programs at KVKs and other similar notified locations.	44	66	122	150	31.03.2023	31.03.2024	31.03.2025	Dept. of Agriculture / Chief Agriculture Officer of respective District	500 various programmes will be organized
9.	Organization of Gram Sabha's for demonstrating crop residue conservation and management machinery	4600	5000	6000	7000	31.03.2023	31.03.2024	31.03.2025	Dept. of Agriculture / Chief Agriculture Officer of respective District	Target for karif 2022 Village Level Camps- 3000

10.	Regular training to agriculture and line departments..	2	6	10	12	31.03.2023	31.03.2024	31.03.2025	Dept. of Agriculture / Chief Agriculture Officer of respective District	5 sessions to be organized by PAU
-----	--------------------------------------------------------	---	---	----	----	------------	------------	------------	----------------------------------------------------------------------------------	-----------------------------------

District Wise CRM Machinery provided under Subsidy 2018-19 to 2021-22																
Sr No	District	Happy seeder	Super seeder	Paddy straw chopper	Mulcher	RMB plough	Zero till drill	super SMS	Rotary slasher	Shrub Master	Cutter cum spreader	Rotavator	Baler	Rake	Crop Reaper/Reaper Binder	Grand Total
1	Amritsar	472	690	268	270	244	562	126	28	16	4	185	9	6	0	2880
2	Barnala	876	1580	540	84	229	866	345	16	0	0	252	10	9	0	4807
3	Bathinda	1192	1785	874	136	438	1550	362	16	0	68	133	16	16	0	6586
4	Faridkot	569	1241	333	167	424	1027	146	71	0	160	204	23	17	0	4382
5	Fatehgarh Sahib	293	498	200	276	230	167	337	10	6	0	225	14	12	0	2268
6	Fazillka	422	1790	420	248	401	1222	117	149	10	44	103	21	21	0	4968
7	Ferozepur	807	1503	663	384	509	1641	394	148	14	109	118	11	13	0	6314
8	Gurdaspur	503	1649	327	132	187	462	242	56	0	25	145	4	5	1	3738
9	Hoshiarpur	170	494	78	97	273	200	64	28	0	15	137	8	8	0	1572
10	Jalandhar	405	1238	165	1180	1134	350	380	74	0	14	238	26	25	1	5230
11	Kapurthala	624	770	89	1000	695	292	197	79	0	21	144	13	12	0	3936
12	Ludhiana	1126	1150	218	793	808	271	599	21	0	0	460	27	24	0	5497
13	Mansa	1278	1407	719	57	223	1515	211	3	0	0	103	6	5	0	5527
14	Moga	888	1290	276	300	400	632	537	13	0	6	152	23	16	0	4533
15	Mukatsar	757	2214	1084	129	662	2252	80	92	26	491	180	19	16	0	8002
16	Pathankot	5	34	11	11	11	31	1	2	0	0	23	0	0	2	131
17	Patiala	697	1695	347	248	370	720	583	38	3	0	233	18	14	0	4966
18	Ropar	134	286	75	38	86	122	65	5	3	0	83	3	3	1	904
19	Sangrur	1496	2579	572	220	286	1296	773	27	0	1	279	5	4	0	7538
20	SAS Nagar	38	132	38	34	57	110	65	29	3	1	127	4	4	0	642
21	SBS Nagar	123	473	36	76	93	96	169	21	0	0	105	11	10	0	1213
22	Tarn Taran	665	1807	434	355	365	725	179	8	2	11	206	15	15	1	4788
	Total	13540	26305	7767	6235	8125	16109	5972	934	83	970	3835	286	255	6	90422

12.0 Summary of Paddy Straw Management

Upon implementation of the crop residue management plan the below given targets are expected to be achieved in next 3 years with details as under:

Sr. No.	Strategy	Cumulative reduction in Paddy Straw (Million Tons)			
		2020-21	2021-22	2022-23	2023-24
1.	Crop Diversification	2.57	3.57	4.570	5.220
2.	In-situ Management	6.45	8.13	9.44	10.70
3.	Ex-situ Management	0.92	1.217	1.514	4.669
	Total	9.94	12.917	15.524	20.589

Note: Achievement depends upon

* Many factors like procurement of Maize and other alternate crops at MSP and extended support.

** Continuous addition of machines and their utilization

*** **Industry consuming paddy straw becomes operational**

13.0 Awareness and Enforcement Measures

Apart from the measures taken for crop diversification, in-situ as well ex-situ management of paddy residue, the various stakeholder Departments of the State Government will carry out wide publicity through print and electronic media to educate the farmers to stop the burning of paddy straw because of its harmful effects on human health, loss of soil nutrients and as well as degradation of air quality. Further, appropriate enforcement measures will also put in place in compliance of various Hon'ble National Green Tribunal orders and as per the provisions of Air (Prevention & Control of Pollution) Act, 1981.

14.0 Reporting Formats

Various Reporting formats are attached as **Annexure-1 to 3**. The Monitoring of various activities of the Action Plan is being reviewed regularly as per the reporting formats at highest level.

PRSC1 – District wise details of Active Fire Events

This report will be sent by Punjab Remote Sensing Centre, Ludhiana to all the Deputy Commissioners and PPCB on daily basis

PRSC 1 – District wise details of Active Fire Events (On daily basis)							
S. No.	Latitude	Longitude	District	Tehsil	Block	Village	Remarks

PRSC 2 – District wise Comparison of Active Fire Events for 2020, 2021& 2022

This report will be sent by Punjab Remote Sensing Centre, Ludhiana to all the Deputy Commissioners, PPCB and Directorate of Environment on daily basis.

PRSC 2 - District-wise Comparison of Active Fire Events for 2020, 2021& 2022 (Daily Basis)							
Sr. No.	District	For the current date			Cumulative (w.e.f. Sept 22)		
		2020	2021	2022	2020	2021	2022
		Current date	Current date	Current date	Upto current date	Upto current date	Upto current date
Total							

Checklist for DCs

Stubble Burning Management		
Sr.No.	Activity Checklist	Yes/ No
1.	<ul style="list-style-type: none"> • Whether District Level Monitoring Committee meetings being held regularly? • How many meetings have been held since 15.09.2021? • Whether specific action points drawn from the meeting & proceedings made? 	
2.	<ul style="list-style-type: none"> • Whether Sub-Division Level Monitoring Committee meetings being held? • How many meetings have been held since 15.09.2021 • Whether specific action points drawn from the meeting and proceedings made? 	
3.	<ul style="list-style-type: none"> • Whether the detailed analysis of incidents of stubble burning from previous years supplied by PPCB has been reviewed? • Whether list of hot spots (villages where more than 75% of the village area burnt for past three years) has been scrutinized by District Level Monitoring Committee? • Whether Special arrangements have been made for these hot spots? 	
4.	<ul style="list-style-type: none"> • Whether subsidized machinery has been delivered to the farmers and Groups as per the approved plans? 	
5.	<ul style="list-style-type: none"> • Whether Village Nodal officer, cluster officer have been appointed to visit and impose EC on the incidents of burning of Stubble as reported by PRSC? • Whether site visits are conducted in two days of incidents? • What is the average time taken by Nodal Officer to visit the reported incidents? 	
6.	<ul style="list-style-type: none"> • Whether arrangements have been made to compile action taken report on the visits? • Whether imposition of EC has been promptly done after the visit, by cluster officer? • Whether other action such as filing of complaint/ FIR etc. has been done? 	
7.	<ul style="list-style-type: none"> • Whether arrangements have been made to ensure compliance by special categories such as Government employees, Commission Agents, Panchayat Members, Numberdaars etc.? • Whether district heads of these departments been asked to take undertaking from their employees regarding compliance? 	
8.	<ul style="list-style-type: none"> • Whether arrangements have been made to ensure red entry in khasragirdawari of the fields where incident has been reported and verified? 	

Annexure-4

PRSC3 –Performa for filling the details of field functionaries

Sr.No	District	Tehsil	Block	Village	PRSC_ID
-------	----------	--------	-------	---------	---------

DCName	DCDesignation	DCContact	DCEmail	ADCName	ADCDesignation	ADCContact	ADCEmail
--------	---------------	-----------	---------	---------	----------------	------------	----------

SDM Name	SDM Designation	SDM Contact	SDM Email	THE Name	THE Designation	THE Contact	THE Email
----------	-----------------	-------------	-----------	----------	-----------------	-------------	-----------

PAT Name	PAT Designation	PAT Contact	PAT Email	DSP Name	DSP Designation	DSP Contact	DSP Email
----------	-----------------	-------------	-----------	----------	-----------------	-------------	-----------

NODName	NODDesignation	NODContact	NODEmail	AEEName	AEEDesignation	AEEContact	AEEEmail
---------	----------------	------------	----------	---------	----------------	------------	----------

SHOName	SHODesignation	SHOContact	SHO Email	CLSName	CLSDesignation	CLSContact	CLSEmail
---------	----------------	------------	-----------	---------	----------------	------------	----------

Performa for monitoring and ensuring paddy straw procurement and its storage by the industrial units

Sr. No.	Name of Regional Office	Name of the Industry	Likely date of commissioning of Boiler with capacity in TPH	Quantity of paddy straw to be procured in TPD	Likely date of purchase of paddy straw	Name and Mobile No. of the supplier who will supply Paddy Straw to the industry	Storage space of paddy straw is available		If no, what steps are being taken up by the industry for storage space	Remarks
							Yes	No		
1.	Village- Gulabewala, Tehsil & District- Mukatsar	Biomass Power Project	Already in Operation (6 MW)	900	1 st October' 2022	The Company will collect paddy straw at its own Sh. B.S Jangra 9876055104	Yes		NA	-----
2	Village: GaddaDhob, Tehsil: Abohar, Distt: Fazilka	BiomassPower Project	Already in Operation (8 MW)	1200	1st October' 2022	The Company will collect paddy straw at its own Sh. B.S Jangra 9876055104	Yes		NA	----
3	Village: Channu, Tehsil: Malout, Distt: Mukatsar	BiomassPower Project	Already in Operation (14.50 MW)	2175	1st October' 2022	The Company will collect paddy straw at its own Sh. NarinderBhullar 9501111859	Yes		NA	----
4	Village: Binjon, Tehsil: Garhshankar, Distt; Hoshiarpur	Biomass Power Project	Already in Operation (6 MW)	900	1st October' 2022	The Company will collect paddy straw at its own Sh. B.S Jangra 09876055104	Yes		NA	----

5	Village: BirPind, Tehsil: Nakodar, Distt; Jalandhar	Biomass Power Project	Already in Operation (6 MW)	900	1st October' 2022	The Company will collect paddy straw at its own Sh. B.S Jangra 09876055104	Yes	NA	----
6	Village: KhokharKhurd, Tehsil & Distt: Mansa	Biomass Power Project	Already in Operation (10 MW)	1500	1st October' 2022	The Company will collect paddy straw at its own Sh. Tejpal Singh, 08437025103	Yes	NA	-----
7	Village: Binjon, Tehsil: Garhshankar, Distt; Hoshiarpur	BiogasPower Project	Already in Operation (4 MW)	600	1st October' 2022	The Company will collect paddy straw at its own Sh. B.S Jangra 09876055104	Yes	NA	-----
8	Village: Panchewali, Teshil: Fazilka, Distt: Fazilka	BiogasPower Project	Already in Operation (1 MW)	133	1st October' 2022	The Company will collect paddy straw at its own Sh. SanjeevNagpal 09872206992	Yes	NA	-----
9	Village: Sedda Singh Wala Tehsil: Jaitu, Distt: Faridkot	Biomass Power Project	Already in Operation (18 MW)	2700	1st October' 2022	The Company will collect paddy straw at its own Sh. VedRatanSinha 08076081142 08054499537	Yes	NA	----
10	Village: Hukumat Singh Wala, Tehsil & Distt: Ferozepur	Biomass Power Project	Already in Operation (18 MW)	2700	1st October' 2022	The Company will collect paddy straw at its own Sh. VedRatanSinha 08076081142 08054499537	Yes	NA	----

11	Village- Bhutalkalan, Tehsil – Lehragaga, Distt- Sangrur	Compressed Biogas (CBG) Project	Already Commissioned and under stabilization (33.23 Ton per day CBG)	1500 TPD	1st October 2022	The Company will collect paddy straw at its own. Sh. Yuvraj Verma 8700036384 9650106013	Yes	NA	Commissioned, under stabilization
12	Village- GhungraliRajputan, Tehsil – Khanna, Distt- Ludhiana	Compressed Biogas (CBG) Project	Likely to be commissioned by September 2022 (12 Ton per day CBG)	500 TPD	1st October 2022	The Company will collect paddy straw at its own. Sh. Karan Kaushal 9958238882	Yes	NA	Filling of Digesters started
13	Village- Malaheri, Tehsil & Distt- Fatehgarh Sahib	Compressed Biogas (CBG) Project	Likely to be commissioned by December 2022 (2.25 Ton per day CBG)	125 TPD	1st October 2022	The Company will collect paddy straw at its own. Sh. Gurjot Singh 9880427326	Yes	NA	Construction at Site completed, Delivery/ Installation of Plant and Machinery in progress