

Item No. 01

Court No. 1

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI**

Original Application No. 666/2018

Smt. Ganga Lalwani

Applicant(s)

Versus

Union of India & Ors.

Respondent(s)

Date of hearing: 01.10.2019

**CORAM: HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON
HON'BLE MR. JUSTICE S.P WANGDI, JUDICIAL MEMBER
HON'BLE MR. JUSTICE K. RAMAKRISHNAN, JUDICIAL MEMBER
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER**

For Applicant (s): None

For Respondent(s): Mr. Ardheundumauli Kr. Prasad, Mr. Shashank Saxena, Advocates for Ministry of Agriculture
Ms. Jyoti Mendiratta, Standing Counsel for GNCT Delhi
Mr. Amit Tiwari, Standing Counsel for State of UP
Ms. Anusha Nagarajan, Advocate for State of Punjab with Mr. M. Kalia, Jt. Dir. Agri. for State of Punjab
Mr. Rahul Khurana, Advocate with J.S. Nain, Agri. Dept, Haryana

ORDER

1. Remedial action to prevent burning of crop residue resulting in air pollution particularly in the NCR Region has been subject matter of consideration before this Tribunal in the last more than six years. According to certain statistics, 25-30% air pollution in NCR is caused by burning of crop residue in and around Delhi in October and November every year. It is reported that burning of crop residue takes places as time gap between the reaping of the paddy crop and

the sowing of the next crop is too less. Since the crop is harvested by machines, residue is left and manual removal thereof is time and labour consuming. Burning of the crop residue is perceived to be helpful in preparing the field for sowing next crop. The fact remains that there is adverse impact of burning of such residue on air quality causing air pollution related diseases which at times may be fatal. As per newspaper reports, to which reference will be made later, 15000 deaths took place in the year 2016 in the NCR region on account of air pollution. Statistics may be similar in other years

2. The Tribunal considered *O.A No. 118/2013, Vikrant Kumar Tongad v. Environment Pollution (Prevention and Control Authority) & Ors.*, vide order dated 10.12.2015. It was noted that farmers will be provided equipments for *in-situ* degradation of crop residue with the financial help given by the Central Government. In spite of the steps taken and directions of this Tribunal, the situation has not so far been remedied. . Every year in October – November problem of air pollution is acute in and around Delhi threatening the health particularly of infants and senior citizens.

3. In above background, the matter was reviewed by this Tribunal on 23.07.2018 in *O.A. No. 451/2018*. The Tribunal noted the scheme of the Central Government “Promotion of Agriculture Mechanization for In-Situ Management of Crop Residue” envisaging assistance by way of machinery, finances and information. The Tribunal directed the Ministry of Agriculture to monitor the situation. The Chief Secretaries of Punjab, Haryana, Rajasthan, Uttar Pradesh and Delhi were to review the situation at their level. Such directions were reiterated vide order dated 18.09.2019 in *O.A. No. 666/2018* and thereafter on

29.10.2018 . 'News Item Published in "The Times of India' Authored by Shri Vishwa Mohan Titled "NCAP with Multiple Timelines to Clean Air in 102 Cities to be released around August 15"¹ to the effect that 15000 premature deaths took place in Delhi in the year 2016 due to severe smog was referred to

4. Again on 12.11.2018, this Tribunal considered newspaper reports "News Item published in "Indian Express" Authored by Mallica Joshi Titled "All fiddle as crop stubble burns, farmers say solutions out of reach" and News Item published in "The Times of India" Authored by Jasjeev. Gandhiok Titled "Day after Dussehra, air quality dives, slight haze over city".

5. The Tribunal held a chamber meeting on 05.09.2018 attended by the Members of the Tribunal, representatives of Central Pollution Control Board, Ministries of Agriculture, Road Transport and Highways, Petroleum and Natural Gas, Heavy Industries, Ministry of Environment, Forest and Climate Change and representatives of the States of Punjab, Haryana, Uttar Pradesh, Rajasthan, NCT of Delhi, apart from the nominees of the Indian Institute of Technology, Delhi, Indian Institute of Technology, Kanpur and NEERI. Various newspaper reports were noted as follows:

"10. The Tribunal also considered the matter on 30.10.2018 in light of news items dated 12.10.2018 in 'Indian Express' under the heading "All fiddle as crop stubble burns, farmers say solutions out of reach", news items dated 13.10.2018 in 'Indian Express' under the headings "Why Farmers Say Cheaper to Pay Fine for Crop Burning" and "As crop burning begins, city could see another episode of bad air quality" as well as on 14.10.2018 under the heading "Air quality dips to 'poor' again, to get worse over next 2 days, says SAFAR". Direction was also issued to Chief Secretaries to States of Punjab, Haryana, Delhi and Uttar Pradesh to monitor the situation on day-to-day basis and furnish

¹ O.A. No. 681/2018

weekly reports to this Tribunal. This matter is also being taken up today.

11. Apart from the above, on 01.11.2018, this Tribunal considered news items dated 21.10.2018 in the Times of India under the heading “Day after Dussehra, air quality dives, slight haze over city” and “Eye on stubble burning, city wakes up to waste and leaves burnt in backyard”, news item in ‘The Hindu’ under the heading “City records worst post-Dussehra air quality in 4 years”, News item dated October 21-27, 2018 in ‘The Economic Times, Magazine big story’ under the heading “CROPPING THE FIRE”, news item dated 22.10.2018 in ‘The Hindu’ under the heading “Years to go to stub out crop burning” and news item dated 22.10.2018 in ‘Millennium Post’ under the heading “Delhi’s air quality remains ‘very poor’ and “Stubble burning increases in Punjab and Haryana” and the said matter is also being taken up for consideration today.”

6. The Tribunal observed:

“16. During the discussion, a suggestion has been considered that those who help the environment by not burning the crop deserve incentive and those who do not do so deserve disincentive. It is clearly permissible and possible as we are told that entries in Khasra girdawaris (field inspections) are made which record as to who is indulging in burning and who is not indulging in burning of crop residue. Based on the said records, incentive and disincentives out of the available resources can be worked out so as to dissuade those who indulge in burning and encourage those who do not burn crops on the basis by way of economic incentive and disincentive. We are not at the moment considering the issue of adverse coercive measures like prosecution etc. for offences under the Air (Prevention and Control of Pollution) Act, 1981 or other applicable laws. We, however, do not see any difficulty why such economic incentives and disincentives should not be duly planned or executed. We make it clear that the existing Minimum Support Price (MSP) Scheme must be so interpreted so as to enable the concerned States to wholly or partly deny the benefit of MSP to those who continue to burn the crop residue. If any such disbursements have already been made with respect to this year’s paddy crop, the same can be adjusted in future. Such a scheme may be worked out and notified forthwith preferably by 14.11.2018. The short time is being given on account of urgency of situation with regard to deteriorating air quality prevailing in NCT of Delhi and adjoining areas.

17. We also feel the need for finding out a long lasting solution to the problem and for this purpose, we direct the Secretary, Agriculture, Govt. of India and Chief Secretaries of the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi to remain present on the next hearing after doing due diligence and strategic planning for action to prevent crop burning. It is open to the Central Government also to organize a meeting on the subject on the same day or any other convenient day.”

7. The matter was again reviewed on 15.11.2018. The proceedings of the meeting organized by the Ministry of Agriculture on 14.11.2018 with the concerned Chief Secretaries were referred to as follows:

“4. The steps considered in the meeting are that the report of the incidents of fire were required to be verified with reference to the satellite data; Information, Education and Communication (IEC) activities by way of scrolls on TV channels, advertisements in the electronic and print media, radio jingles, short films on television, demonstrations, training, school and college student motivation will be carried out in ‘massive campaign mode’ in the concerned area. Ex-situ use of paddy will be explored as source of energy in brick kilns or as source for electricity generation. Custom Hire Centres will be linked through mobile App to enable farmers to hire equipment at cheaper rate. Incentives and dis-incentives with reference to MSP will not be practical.

5. A Committee has been formed under the Chairmanship of Shri Nagesh Singh, MIRD-MoRD as follows:

- 1. Shri Nagesh Singh, MIRD, MoRD – Chairman*
- 2. DDG (Engg.) – ICAR – member*
- 3. Principal Secretaries of Agriculture from State Agriculture Departments of Punjab, Haryana and Uttar Pradesh – Members*
- 4. Joint Secretary (M&T), DAC&FW – Convener*

6. Terms of the reference of the Committee will be as follows:

- Assessment of the Nos. of Machinery distributed in States*
- Assessment and impact of the machinery use by the farmers*
- Assessment of the benefits accrued to the farmers.*
- Recommendation of area specific varieties of crops where crop burning is higher.*
- Suggesting alternative more remunerative and advantageous industrial use of crop residue in respective States.*
- Recommending other inputs, for making long term policy.*

12. It has also been pointed out that in Haryana, the Haryana Bio Energy Policy, 2018 has been notified on 09.03.2018 which provides for bio-based power projects. Live demonstrations of in-situ crop residue management have been given at village level. Crop burning is monitored through satellite. Monitoring is also done at Chief Secretary level regularly through field visits and Video Conferencing. MoU has been signed between the Department of Agriculture and the Indian Oil Corporation for use of crop residue for bio-refinery. State Level Monitoring Committee has been constituted to prevent crop residue burning.

13. With a view to permit exploring of best practices, we clarify that the order with regard to recovery of penalties and the machinery for collection will be open to be applied in such way as found viable in respect of manner of collection, machinery for collection and spending of the amount. We also expect that the situation will be reviewed at the level of Chief Secretaries periodically. The States or Haryana & U.P. may strengthen the system of compiling data

appropriately through revenue entries as we are informed that in the States of Haryana and Uttar Pradesh such entries are not being made as are being made in the State of Punjab.

14. *We also expect that the funds be disbursed by the Central Government well in time and utilized by the States accordingly, for the next year. IEC programme be strengthened. There should be a continuous process by coordinating with the para legal volunteers of the Legal Service Authorities. Steps taken by different States may be put on the respective websites. The Committee already constituted may look into the source apportionment of different pollutants in the air with a view to devise appropriate strategies for mitigation. The Committee may also consider whether it is possible to adopt mitigation measures at local level itself where crop burning takes place so that the impact outside is minimized.*

15. *We are informed that the Secretary, Agriculture holds video conference meetings weekly with the Principal Secretaries of the Uttar Pradesh, Punjab, Haryana and with the District Collectors/District Magistrates of the Districts where the issue is relevant. The Director General of ICAR holds review meetings every month with all the stakeholders. The Principal Secretary to the Prime Minister also reviews the issue from time to time. Five meetings have been held in this regard with the Secretary, Agriculture, Secretary, Environment, Secretary, Road and Transport and with the Secretaries of the concerned States from January to October 2018. Satellite images are sent to the States in respect of the area in question on daily basis.”*

8. On 05.07.2019, the matter was again taken up in continuation of the earlier proceedings and in the light of report of the Ministry of Agriculture dated 21.06.2019. It was noted as follows:

“3. In pursuance of the above directions, a report has been filed vide email dated 21.06.2019 by the Ministry of Agriculture. The report mentions the Central Sector Scheme on ‘Promotion of Agricultural Mechanization for in-situ management of crop residue in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi’ providing for subsidy for purchasing the requisite machinery. Subsidy to an individual is 50% of the cost and 80% to the cooperative societies. There is also a scheme for providing the machinery on hire basis. The report notes that there are adverse effects of crop residue burning not only on air quality but also on soil properties. The crop residue burning is a source for greenhouse gases. More serious problem was known in respect of Basmati paddy which is not harvested manually. The burning was to the extent of 16.9% in Haryana and 49.47% in Punjab. The farmers are preferring long duration varieties considering it to be more profitable while short duration varieties can provide a solution by making larger window of time available, without any monetary loss. Alternatives to paddy cultivation are available which can be adopted by providing for relevant incentives. Maize can be one alternative crop which can be promoted. Preference has to be for in-situ management

though option of ex-situ management is available by using the crop residue for bio-energy or other projects. Recommendations of the Expert Committee include providing CRM machines timely by 30.09.2019, so as to be available for the entire sowing period; IEC campaign being strengthening through various media during August to October; shorter duration paddy varieties being preferred; the ICAR institute and Departments of Agriculture being supported so that they can increase their outreach and hand hold farmers; in the area of crops diversification, horticulture, vegetables and cultivation of maize being encouraged. For this purpose, the use of maize in industrial applications, mainly for ethanol and other products may be encouraged.

4. During the hearing, we have drawn the attention of the learned counsel for the Ministry of Agriculture to the observations in para No. 16 of the order dated 12.11.2018 noting the suggestion to consider incentives and dis-incentives to encourage those who do not indulge in burning of the crop residue by recording an entry in the field reports, by giving some incentives or dis-incentives out of the same kitty of the subsidy. Such strategy may be in respect of individuals or in respect of area in question. Even though the report mentions that certain awards have been given, some financial incentives/disincentives need to be considered.

5. We may also point out that need to explore coordination with the ISRO for developing an App through BHUVAN ISRO's Geoportal to alert the village level officers or the local police where crop burning is noticed. The use of drones may be considered apart from satellite imagery to map the hot-spots in the same manner as is done in respect of forest fires and strategies be drawn accordingly. Finally, the monitoring network is required to be effective and more vigilant. Though Bhuvan, which is a geoportal of the ISRO, is said to have been used at macro-level, its use at micro-level so as to generate SMS alert needs to be explored at the ground level. These suggestions need to be considered by the Ministry of Agriculture in coordination with the concerned States and thereafter, further monitored at the grass root level by the concerned Deputy Commissioners/Collectors.

6. We may also note a suggestion which has transpired during the hearing and has been put forward by Dr. S. Mukherjee, Registrar, Jobner Agriculture University, Jaipur that the crop residue has huge potential for the organic manure and decentralized composting units could be set up either in the concerned fields or common composting units at community level in a village or in a cluster of villages. At least one such pilot project needs to be considered in each State. This aspect may be further explored in the meeting of the Ministry of Agriculture with the concerned States within one month. We are informed that in the State of Rajasthan, this has been successfully tried by Sri Karan Narendra Agriculture University, Durgapura, Jaipur. Further, the gap analysis study may be undertaken in regard to the current situation, the challenges be identified and the necessary steps taken to mitigate the situation.”

9. We have for consideration minutes of meeting dated 25.09.2019 on the subject. The meeting was called by the Joint Secretary, Agriculture, Government of India with the representatives of the States of Punjab, Haryana and Uttar Pradesh. Progress of distribution of machinery is recorded as follows:

Name of the State	Physical Progress							
	Physical Targets (Nos.)		Application Received (Nos.)		Application Sanctioned (Nos.)		Machines delivered (Nos.)	
	Individual	CHCs	Individual	CHCs	Individual	CHCs	Individual	CHCs
Punjab	7600	6230	8746	5874	7712	5623	1658	2483
Haryana	15343	784	50598	913	9702	795	4506	4007
Uttar Pradesh	4077	1817	1918	1817	1918	1817	-	-
Total	27020	8831	61262	8604	19332	8235	6164	6490

10. Proceeding further are:

“(ix) After discussion and hearing the comments from all the State Governments, it has been advised as under:-

- (a) As the paddy harvesting season is started in some pockets of the State of Punjab & Haryana, the States should ensure delivery and utilization of these machines to their full capacity.*
- (b) Major focus should be on bringing more area under happy seeder which is a major, effective and economical solution to the farmers for paddy residues management*
- (c) As the crucial season has already begun, the States and KVKs should take up the IEC activities more vigorously to educate the farmers on ill effects of paddy residue burning and the advantages of incorporation of paddy residue into the soil.”*

11. The above statistics show that physical targets are not supported by any expert study to be effective enough to neutralize the impact of air pollution caused by burning of crop residue. In any case the said targets have not been achieved. As against target of 27020 individual and 883 Custom Hiring Centres, machines delivered are 6164 and 6490. Overall average of success appears to be around 35% only

12. Thus, it does appear that unless further effective measures are adopted, the problem of air pollution by burning of crop residue may not be remedied. We are of the view that this concern needs to be addressed by effective environmental governance which is inalienable duty of the State. No doubt, the funds have been allocated by the Central Government for the purpose but the Central Government ought to provide further guidance in terms of effective strategies to be used for monitoring the situation. At the level of States, the responsibility may be more onerous and still more onerous at the District level. It may be desirable to have a special cell in the office of the Chief Secretary so that the situation is reviewed on daily basis atleast for next one month, even on holidays. Similar cells may be required at the offices of District Magistrates or at such other levels as may be considered necessary by the State Authorities. Such monitoring mechanism may be finalized by 07.10.2019 and placed on the website of the State which may encourage public participation and enhance awareness.

13. We do hope that with sincere efforts at all levels it may not be difficult to contain the problem in the interest of better air quality and public health.

14. We direct the concerned Joint Secretary, Ministry of Agriculture, Government of India and Secretaries, Agriculture of States of Punjab, Haryana and Uttar Pradesh (whatever may be the designation in the concerned States) to appear before this Tribunal alongwith their status reports on 15.10.2019 at 10:30 am for further consideration.

List for further consideration on 15.10.2019.

Adarsh Kumar Goel, CP

S.P Wangdi, JM

K. Ramakrishnan, JM

Dr. Nagin Nanda, EM

October 1, 2019
Original Application No. 666/2018
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