

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

Original Application No. 1088/2018  
(I.A. No. 98/2019, I.A. No. 100/2019, I.A. No. 101/2019,  
I.A. No. 119/2019 & I.A. No. 266/2019)

Dinesh Chahal & Ors.

Applicant(s)

Versus

Union of India & Ors.

Respondent(s)

Date of hearing: 30.01.2020

Date of uploading on the website: 06.02.2020

**CORAM:**

**HON'BLE MR. JUSTICE ADARSH KUMAR GOEL, CHAIRPERSON  
HON'BLE MR. JUSTICE S.P WANGDI, JUDICIAL MEMBER  
HON'BLE DR. NAGIN NANDA, EXPERT MEMBER  
HON'BLE MR. SIDDHANTA DAS, EXPERT MEMBER**

**ORDER**

1. Question for consideration is the validity of the order issued by the Director, Food, Civil supplies and Consumers Affairs, Government of Haryana, Chandigarh – Respondent No. 3 extending time limit for adoption of Zig-zag Technology for running of the brick kilns beyond NCR area upto 31.07.2019, without any scientific study on carrying capacity for such activity and without any safeguards. Further question which has emerged during the proceedings is permissibility of FCBTK technology kilns, using agro fuel. Issue of permissibility even of Zig-zag technology kilns in NCR region on account of adverse impact on air quality is being dealt with by a separate order in O.A. No. 1016/2019.

2. The matter was considered on 30.04.2019 as follows:

“2. Case of the applicant is that air pollution is causing deaths and diseases and to remedy the situation, the Central Pollution Control Board (CPCB) directed adoption of Zig Zag Technology on 30.12.2015 for NCR. Similar order was passed by the Environmental Pollution (Prevention and Control) Authority (EPCA) asking the NCR States to use Zig Zag Technology for brick kilns in the light of the order of the CPCB. However, without any study or safeguards for the norms under the Air (Prevention and Control of Pollution) Act, 1981 (Air Act), the Food and Supply Department, State of Haryana allowed the conventional brick kilns to operate in non-NCR Region, contrary to the decision of the State of Haryana itself requiring improved emission technology to be used for operating the brick kilns.

3. Vide order dated 07.01.2019, while issuing notice, this Tribunal stayed the operation of the order of the Director, Food, Civil supplies and Consumers Affairs, Government of Haryana, Chandigarh. The matter was again considered on 21.02.2019 with reference to the contention that the impugned order was only for Non-NCR to which order of CPCB or EPCA did not apply. The Tribunal held that even in Non-NCR, Standards of Ambient Air Quality laid down under Section 17 (g) of the Air Act are required to be followed. If the impugned order has been passed without undertaking any study on status of ambient air quality without any carrying capacity assessment to take the additional load at concerned areas and without any safeguards on ‘Precautionary’ principle, the same may not be justifiable having regard to the acknowledged adverse impact of operation of the brick kilns on the ambient air quality. Reference was made to the Judgements of the Hon’ble Supreme Court in *M.C. Mehta v. Union of India*, (1998) 9 SCC 149, *M.C. Mehta v. Union of India* (2000) 7 SCC 422, *M.C. Mehta v. Union of India*, (2002) 4 SCC 378, *K. Guruprasad Rao v. State of Karnataka*, (2012) 12 SCC 736 wherein the Hon’ble Supreme Court directed closure or shifting of brick kiln industries and *M.C. Mehta v. Union of India*, (2001) 9 SCC 235 laying down that brick kilns may be allowed to operate after studying the impact on human population and vegetation. The State of Haryana sought time to show whether any exercise was undertaken as per the ‘Precautionary’ principle of environment while passing the order. The interim order was allowed to continue.

4. **An affidavit has been filed by the State of Haryana on 04.04.2019 which does not show any study having been undertaken except to say that the CPCB has proposed that conventional brick kilns using agricultural residue should be allowed and that conversion to Zig Zag Technology will lead to financial hardship and inflation in the market.**

5. I.A. No. 98/2019 has been filed by certain brick kilns for variation of interim order. The application states that brick kilns have been granted Consent to Operate and have constructed stack height of 30 meters which itself was adequate safeguard. There is no justification for requirement of Zig Zag technology beyond the NCR and direction be given for use of crop residue as suggested by CPCB.
6. The application was directed to be considered along with the main case. I.A. No. 266/2019 was filed for early hearing in the light of the order of the Hon'ble Supreme Court dated 15.03.2019 to consider whether the interim order needs to be varied. On 12.04.2019, the CPCB took time to take instructions. However, no affidavit has been filed by the CPCB so far.
7. Thus, the question for consideration is whether on 'Precautionary' principle, any study of ambient air quality is required for permitting operation of brick kilns in the State of Haryana. This led to earlier decision of the Government restricting running of brick kilns in Punjab and Haryana except by using Zig Zag technology. Impugned order relaxed this requirement.
8. Learned counsel for the applicant submits that in absence of an expert study with regard to the status of ambient air quality and **carrying capacity assessment, the impact of running brick kiln in the impugned order permitting all brick kilns to operate upto 31.07.2019 in non-NCR area is not justified.** Learned counsel for respondents submitted that conventional brick kilns using crop residue may be allowed. It was also submitted that this Tribunal has no jurisdiction as interference by the Tribunal amounts to exercise of power of 'judicial review.'
9. We are satisfied that in absence of any study in spite of orders of this Tribunal dated 21.02.2019, it will be hazardous to permit operation of the brick kilns in view of acknowledged adverse impact on the air quality. At the same time, we direct the State of Haryana and the CPCB to undertake study of air quality carrying capacity assessment and impact of operation of the conventional brick kilns using agri-residue at the earliest and furnish a report to this Tribunal. CPCB will be the nodal agency. If burning of crop residue helps the situation, the same may be studied and report submitted. Mechanism be suggested to ensure that only crop residue is used for firing when conventional brick kilns are operated. We note that impugned order is not limited to kilns using crop residue. The order applies to every kiln without any restriction or safeguard. The same will have to be modified to that extent.
10. As regards the objection raised on behalf of the affected brick kilns that this Tribunal has no jurisdiction in the

*matter in view of the judgement of the Hon'ble Supreme Court in Tamil Nadu Pollution Control Board v. Sterlite Industries, AIR 2019 SC 1074, we do not find any merit in the submission. The operation of the brick kilns impacting air quality raises a substantial question of environment and for protection of environment, this Tribunal has jurisdiction to pass orders under Section 15 of the NGT Act which also includes power to issue interim order. While Tribunal may not exercise 'judicial review' jurisdiction of High Court and Supreme Court, jurisdiction under Sections 14, 15 and 20 of the NGT Act, 2010 can certainly be exercised. Otherwise setting up of Tribunal will have no purpose.*

*List for further consideration on 15.05.2019 in the light of expert study to be produced by the State of Haryana/CPCB. This date is being subject of report of expert Committee being received. If giving report takes more time, the date will have to be extended."*

3. Thereafter, the matter was again considered on 30.07.2019 and it was observed:

*"4. The report furnished today by the CPCB is not adequate in terms of the order of this Tribunal. Realizing this state of affairs, learned Counsel for the CPCB as well as the officers of the CPCB who are present seek further time to file a proper report which may enable this Tribunal to assess the information whether such **brick kilns can be allowed by using crop residue or otherwise, apart from the brick kilns operating by using zig zag technology.***

*5. The study may be carried out in comparable area. It is stated that the study requires three months. The CPCB may in its report indicate the location/area and names of the brick kilns where study has been carried out.*

*6. Though operation of order was only till 31.07.2019 which was stayed by this Tribunal, the studies may still be helpful for regulating the working of brick kilns."*

4. Accordingly, further report dated 22.01.2020 has been filed by the CPCB. The report does not mention the carrying capacity of the area in question i.e. non-NCR area in the State of Haryana. Though such capacity in respect of Suratgarh area, Distt. Sriganganagar has been assessed and found to be negative. The relevant portion of report is given below:

“	<p><b>Estimation of total existing PM10 Load in Suratgarh Area, Rajasthan during</b></p>
	<p><b>study period:</b></p>
	<p>Total area of Suratgarh in <b>Km<sup>2</sup>: 2827.56</b>  (Ref.: District census Handbook, Ganganagar, 2011, Directorate of Census Operations, Rajasthan)  Mixing Height of Air in Suratgarh in <b>Km: 1.066154</b>  (Ref: Since site specific mixing heights were not available, mixing heights based on <b>IMD</b> Publication "Atlas of Hourly Mixing heights and Assimilative Capacity of Atmosphere in India", was considered. No air modeling was done in this study to calculate the mixing height)  Total Volume of Air in Suratgarh in Km<sup>3</sup>: <math>2827.56 \times 1.066154 = \mathbf{3014.614}</math>  Average measured PMio Concentration of Ambient Air in Suratgarh Area (Ref: Table 8: Ambient Air Quality Results; S.No, 5 &amp; 6) during study period: <b>523</b> pg/m<sup>3</sup> i.e. 523 Kg/Km<sup>3</sup>  Therefore, Total estimated load of particulate matter (PM to) in ambient air of Suratgarh Area: <math>(3014.614 \times 523)/1000 = \mathbf{1576.64 MT}</math></p>
	<p><b>Estimation of Assimilative Capacity w.r.t. PMT in Suratgarh Area,</b></p> <p>Total area of Suratgarh in <b>Km<sup>2</sup>: 2827.56</b> (Ref.: <b>District census Handbook, Ganganagar, 2011, Directorate of Census Operations, Rajasthan</b>)  Mixing Height of Air in Suratgarh in <b>Km: 1.066154</b> (Ref: Since site specific mixing heights were not available, mixing heights based on IMD Publication "Atlas of Hourly Mixing heights and Assimilative Capacity of Atmosphere in India", was considered. No air modeling was done in this study to calculate the mixing height)  Total Volume of Air in Suratgarh in Km<sup>3</sup>: <math>2827.56 \times 1.066154 = \mathbf{3014.614}</math>  Particulate Matter (PMio) required to keep Ambient air quality at Satisfactory Level: <b>100 pg/M<sup>3</sup></b> i.e <b>100 Kg/Km<sup>3</sup></b> (Ref: Air Quality Index)  Therefore, Assimilative Capacity w.r.t PMio in ambient air of Suratgarh Area: <math>(3014.614 \times 100)/1000 = \mathbf{301.46 MT}</math></p>
	<p><b>Estimation of Supportive Capacity w.r.t. PMio in Suratgarh Area, Rajasthan</b></p>
	<p><b>during study period:</b></p>
	<p>Total estimated load of PMio in ambient air of Suratgarh Area during study period: <b>1576.64 MT</b>  Assimilative Capacity w.r.t PMio in ambient air of Suratgarh: <b>301.46 MT</b>  <b>Supportive Capacity = Assimilative Capacity - Total Estimated Load</b>  Therefore, Supportive Capacity w.r.t. PMio in ambient air of Suratgarh Area: <math>301.46 - 1576.64 = \mathbf{1275.18 MT}</math></p>
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5. The other issue dealt with is whether brick kilns can be allowed by using crop residue as a substitute for Zig-zag technology. The observations and conclusions drawn in the report are non-conclusive and cannot be relied upon in terms of small data base of sample size and number of days for which the sampling has been carried out. Besides, more brick kilns in each category should have been covered to avoid statistical errors in decision making. The performance of

brick kilns is required to be evaluated against the background concentration and carrying capacity of the area. Comparison in the report has been made with incomparable situations, as was explained during the course of hearing. From the data made available by the joint Committee it is evident that particulate emissions for Zig-zag kilns using coal as a fuel is much lower than brick kilns operating on FCBTK technology using agro-residue as a fuels both with regard to initial firing and mid firing situations. Further, emission levels also vary quite significantly amongst different fuel types under agro-residue category. Further justification of impact of higher PM concentration during initial firing has no scientific logic. The joint Committee has erred in concluding that the impact of higher PM concentration during initial firing may not be significant when overall operation of any brick kiln for a particular season is considered.

6. It is acknowledged in the report of joint Committee that stack emissions are less in case of kilns operating on Zig-zag technology, compared to the kilns operating on FCBTK technology on the same fuels. The report further mentions that introduction of FCBTK technology using agro-residue may be done only after carrying capacity assessment of specific area, covering estimation of total existing PM load, assimilative capacity with regard to PM and supportive capacity with regard to PM. Further, in view of large number of brick kilns operating in the area, besides carrying capacity issue with regard to ambient air, there are issues with regard to environmental degradation on account of operation of such large number brick kilns having potential for loss of productive top soil which takes thousand of years to form and is a prime factor which determines agricultural productivity.

7. For the above reasons, while the life of impugned order dated 07.12.2018 passed by the Director, Food, Civil supplies and Consumers Affairs, Government of Haryana has expired, question whether FCBTK technology can be allowed in non-NCR region of Haryana by using agri-residue will be determined in the light of further report as to the carrying capacity of the area in the light of potential for impact on the air quality of the area and on NCT Delhi specially during the winter months and degradation of top soil.
8. Accordingly, let the carrying capacity study which has adequate samples in terms of number of brick kilns and days for which the emissions monitored be conducted covering the impact on ambient air and the loss of top soil. Such study may particularly assess the permissible number of brick kilns and technology to be used for the same in the non-NCR region. Let further report in the matter be furnished by the Member Secretary, CPCB by 31.03.2020 by e-mail at [judicial-ngt@gov.in](mailto:judicial-ngt@gov.in).

List again on 14.04.2020.

Adarsh Kumar Goel, CP

S.P Wangdi, JM

Dr. Nagin Nanda, EM

Siddhanta Das, EM

February 06, 2020  
O.A. No. 1088/2018  
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