

**BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI
(BY HYBRID MODE)**

Original Application No. 783/2022
(I.A. No. 172/2023, I.A. No. 173/2023,
I.A. No. 174/2023 & I.A. No. 175/2023)

Ajay Kumar Applicant

Versus

Uttarakhand Pollution Control Board & Ors. Respondent(s)

Date of hearing: 18.07.2023

**CORAM: HON'BLE MR. JUSTICE SHEO KUMAR SINGH, CHAIRPERSON
HON'BLE MR. JUSTICE ARUN KUMAR TYAGI, JUDICIAL MEMBER
HON'BLE DR. A. SENTHIL VEL, EXPERT MEMBER**

Applicant: Mr. Rimika Chauhan, Advocate

Respondent: Mr. Rahul Verma, AAG for the State of Uttarakhand
Mr. Kaushal Gautam, AAG with Mr. Mukesh Verma & Ms. Snehpreet
Kaur, Adv. for UKPCB
Mr. A.R. Takkar, Adv.
Mr. Shubham Bhalla & Ms. Ragini Sharma, Adv.

ORDER

1. The main question involved in this application is extending applicability of Graded Response Action Plan (GRAP), applicable to Fixed Chimney Bull Trench Kilns (FCBTK) to other coal fired brick kilns, including those using zig-zag technology in the State to maintain the air quality with regard to carrying capacity for improving effectiveness of safeguards and the regulatory measures to minimise the impact of air pollution by operation of brick kilns and to enforce the prescribed norms in absence of carrying capacity of the environment to sustain such activity

2. In India, air quality standards are measured in terms of the Air Quality Index (hereinafter "AQI"). The AQI was launched in India on 17-10-

2014 by the Ministry of Environment and Forests. According to the press release of the Press information Bureau of the same date, it consists of a comprehensive set of parameters to monitor and assess the air quality. The AQI considers eight pollutants (PM10, PM2.5, NO2, SO2, CO, O3, NH3, and Pb), and based on the levels of these pollutants six categories of AQI ranging from “Good” to “Severe” have been prescribed. The index also suggests the health effects of the pollution category wise.

3. The adverse effects of these extreme levels of air pollution spare no one — the young, the old, the infirm and even the future generations. A study of the data of the Global Health Depository of the World Health Organization reveals that India has the world's highest death rate from chronic respiratory diseases and that about 1.5 million people in India die annually due to indoor and outdoor pollution. The Kolkata-based Chittaranjan National Cancer Institute (CNCI), in a study commissioned and handed over to the Central Pollution Control Board, found that key indicators of respiratory health, lung function to palpitation, vision to blood pressure, of children in Delhi, between four and 17 years of age, were worse off than their counterparts elsewhere. It also found that more than 40% of the school children suffer from lung damage (Landmark Study Lies Buried, 2-4-2015, The Indian Express). We note with apprehension that there are nascent studies suggesting that pollution can lower children's IQ, hurt their test scores and increase the risks of autism, epilepsy, diabetes and even adult-onset diseases like multiple sclerosis (Holding Your Breath in India, 29-5- 2015, The New York Times).

4. When we refer to these extreme effects, we are not merely referring to the inconvenience caused to people, but to object deprivation of a range of constitutionally embedded rights that the residents ought to have enjoyed. Needless to state, the grim situation of air quality adversely

affected the right to education, work, health and ultimately, the right to life of the citizens, and this Tribunal is constitutionally bound to address their grave concerns. ***(M.C. Mehta v. Union of India [M.C. Mehta v. Union of India, (1998) 6 SCC 60] , [M.C. Mehta v. Union of India, (1998) 9 SCC 589] , M.C. Mehta v. Union of India [M.C. Mehta v. Union of India, (1998) 8 SCC 648] and M.C. Mehta v. Union of India [M.C. Mehta v. Union of India, (1998) 8 SCC 206]).***”

5. The grievance was raised in this application that a large number of brick kilns are operating illegally without having requisite consent/NOC/Clearance from the appropriate Statutory Regulators under the provisions of Water (Prevention and Control of Pollution) Act, 1981, Air (Prevention and Control of Pollution) Act, 1974 and the Environmental (Protection) Act, 1976. It is stated that in the State of Uttarakhand most of the area is hilly terrain and the plain area mostly comprises District Haridwar. More than 190 brick kilns are operating in the area without complying with the requirement of environmental norms and laws in as much as the most of the brick kilns do not have any valid consent/NOC/clearance from the concerned Statutory Regulators and have not followed or applied zig zag technology in running their brick kilns. An information received from RTI is also placed on record to show that out of 195 brick kilns identified by State PCB, only 14 brick kilns have valid consent and rest are operating illegally, still no action has been taken by officials of State PCB.

6. Tribunal noticed that 195 brick kilns were identified in District Haridwar out of which only 14 brick kilns were having valid consent, still, other brick kilns were functioning and hence required State PCB to explain as to how the brick kilns without valid consents are running and, if any action was taken, details of such action was required to be furnished.

Further, Tribunal constituted a joint Committee comprising State PCB and District Magistrate, Haridwar to submit a factual report and also stated that in the report particulars as to what remedial or preventive action has been taken against brick kilns running illegally in District Haridwar shall be given and also relevant facts on the aspects of citing criteria, and air carrying capacity in accordance with the MoEF&CC Notification dated 22.02.2022 shall be given in the report.

7. Pursuant to order dated 04.11.2022, State PCB has filed a factual report dated 09.01.2023. The report reads as under:

“II. FACTUAL REPORT:

*The Joint Inspection Report along with Annexures of a Joint Committee is enclosed as **ANNEXURE-1**.*

As per observations of the Joint Committee and latest status communicated by the Regional Office. Roorkee, the status of brick kilns of district Haridwar is as given below:

- 1. There are 195 nos. of brick kilns are established in District Haridwar. Out of 195 brick kilns, 141 bricks kilns are converted their brick kilns in to Induced Draft Brick Kilns (Zig-Zag brick setting with rectangular shape of kiln).*
- 2. 05 nos. of brick kilns are under conversion to induced draft brick kiln*
- 3. Out of 141 brick kilns who have converted their brick kilns in to induced defat brick kiln. 71 brick kilns are having valid Consolidated Consent and Authorization (CCA), while CCA application of 37 brick kilns are under consideration.*
- 4. There are 40 brick kilns who have not converted in to induced draft techniques in compliance of the directions issued by the State Board on dated 13.05.2019 under section-33(A) of the Air (Prevention and Control of Pollution) Act, 1981. as amended.*
- 5 Further. 09 brick kilns are dismantled.*

*Detail status in tabular form of Brick Kilns is enclosed as **ANNEXURE- 2**.*

III. ACTION TAKEN BY UKPCB:

Based on the observations of the Joint Committee, notices have been issued to all such 40 brick kilns who have not converted in to Induced draft brick Kiln (Zig-zag brick setting with rectangular shape of kiln) in compliance of directions issued by

the UKPCB on dated 13.05.2019. Copy of notice issued on 02.01.2023 is enclosed as **ANNEXURE-3**. Further action will be taken in accordance of law.

Notice was also published in daily newspaper (Amer Ujala) on dated 20.11.2022. Copy of newspaper published is enclosed as **ANNEXURE-4**.

Further. action is being initiated against those brick kilns who have not obtained CCA from the UKPCB under the provisions of the Air (Prevention and Control of Pollution) Act, 1974 and the Water (Prevention and Control of Pollution) Act, 1974, as amended.

IV. Reply of UKPCB w.r.t. Para 4 & 5 of order dated 04.11.2022:

Notices were issued time to time to brick kilns from the Regional Office, Roorkee (Haridwar) time to time for compliance of statutory provisions. Copies of letters issued on 13.09.2021 and 22.09.2022 are is enclosed as **ANNEXURE- 5 & 6**.

In the year 2021. complaint cases against operator(s) of 10 brick kilns have been filed before the Designated Court by the UKPCB due to no-compliance of provisions of the Air (Prevention and Control of Pollution) Act, 1981 and/or Environment (Protection) Act, 1986. Complaint cases are under pending before the Designated Court. List of such brick kilns is enclosed as **ANNEXURE-7**.

Further, it is state that permission of new brick kiln will be granted in accordance of notification dated 22.02.2022 of the Ministry of Environment, Forest and Climate Change, Government of India.

The status of Consent to Operate of brick kilns is given in the preceding paras.”

8. Along with the report, there is a document filed as Annexure-I in which there is a chart giving overall status of brick kilns as on 16.12.2022 and the same reads as under:

Overall Status of Brick Kiln as on date 16.12.2022				
Total No of Brick Kiln in Haridwar, District	Induced Draft	Natural Draft	Under Construction of Induced Draft	Dismantled

<i>Total Brick Kiln</i>	<i>Total Induced Draft</i>	<i>Valid CCA</i>	<i>Without CCA</i>	<i>Applied/Not Applied</i>	<i>Total Natural Draft</i>	<i>Valid CCA</i>	<i>Not Applied</i>	<i>Total Under Construction Brick Kiln</i>	<i>Applied/ Not Applied</i>	
195	141	37	104-	57/47	40	0	40	05	1/4	9

9. While considering the matter on 12.01.2023, this Tribunal observed that State PCB failed to explain as to why and how 149 brick kilns which have no consent whatsoever and even if some of them have applied but consent is not granted, how such brick kilns without consent are operating. Mere submission of application does not mean grant of consent and unless consent is granted the brick kilns could not have been allowed to function. It is further statutory duty of the authorities/State PCB to consider the pending applications and dispose of within a timeframe.

10. In its reply, State PCB Uttarakhand has submitted that presently at the time of submission of reply/response, there are 144 induced draft kilns. 71 already had valid CCA as found on 12.01.2023 and 70 were issued conditional CCA subject to the outcome of the present proceeding. 3 induced draft kilns which were closed for long time and did not apply for CCA have been permanently sealed and 70 induced draft kilns which were granted conditional CCA are at present non-operational.

11. MoEF&CC, vide notification dated 22.02.2022 issued the directions substituting Environment (Protection) Rules, 1986 in the Schedule-I, for entry at Sl. No. 74 as follows:

"74 Brick Kilns"	<i>Particulate matter in stack emission</i>	<i>250 mg/Nm³</i>
	<i>Minimum stack height (Vertical Shaft Brick Kilns)</i> <i>- Kiln capacity less than 30,000 bricks per day</i> <i>- Kiln capacity equal or more than 30,000 bricks per day</i>	<i>14 m (at least 7.5m from loading platform)</i> <i>16 m (at least 8.5m from loading platform)</i>

	Minimum stack height (Other than Vertical Shaft Brick Kilns) - Kiln capacity less than 30,000 bricks per day - Kiln capacity equal or more than 30,000 bricks per day	24 m 27 m
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Notes :

1. All new brick kilns shall be allowed only with zig-zag technology or vertical shaft or use of Piped Natural Gas as fuel in brick making and shall comply to these standards as stipulated in this notification.
2. The existing brick kilns which are not following zig-zag technology or vertical shaft or use Piped Natural Gas as fuel in brick making shall be converted to zig-zag technology or vertical shaft or use Piped Natural Gas as fuel in brick making within a period of (a) one year in case of kilns located within ten kilometre radius of non-attainment cities as defined by Central Pollution Control Board (b) two years for other areas. Further, in cases where Central Pollution Control Board/State Pollution Control Boards/Pollution Control Committees has separately laid down timelines for conversion, such orders shall prevail.
3. All brick kilns shall use only approved fuel such as Piped Natural Gas, coal, fire wood and/or agricultural residues. Use of pet coke, tyres, plastic, hazardous waste shall not be allowed in brick kilns.
4. Brick kilns shall construct permanent facility (port hole and platform) as per the norms or design laid down by the Central Pollution Control Board for monitoring of emissions.
5. Particulate Matter (PM) results shall be normalized at 4% CO2 as below:

PM (normalized) = (PM (measured)x 4%)/ (% of CO2 measured in stack), no normalization in case CO2 measured ≥ 4%. Stack height (in metre) shall also be calculated by formula H=14Q^{0.3} (where Q is SO2 emission rate in kg/hr), and the maximum of two shall apply.

6. Brick kilns should be established at a minimum distance of 0.8 kilometre from habitation and fruit orchards. State Pollution Control Boards/Pollution Control Committees may make siting criteria stringent considering proximity to habitation, population density, water bodies, sensitive receptors, etc.
7. Brick kilns should be established at a minimum distance of one kilometre from an existing brick kiln to avoid clustering of kilns in an area.
8. Brick kilns shall follow process emission/fugitive dust emission control guidelines as prescribed by concerned State Pollution Control Boards/Pollution Control Committees.
9. The ash generated in the brick kilns shall be fully utilized in-house in brick making.
10. All necessary approvals from the concerned authorities including mining department of the concerned State or Union Territory shall be obtained for extracting the soil to be used for brick making in the brick kiln.
11. The brick kiln owners shall ensure that the road utilized for transporting raw materials or bricks are paved roads.

12. *Vehicles shall be covered during transportation of raw material/bricks”.*

12. In the light of above order, the Board extended the time limit for conversion and in light of the extension granted by the State, the Regional Officer granted conditional CCA to 36 Natural Draft Kilns subject to their conversion and final order of the present proceedings.

13. The District Magistrate, Haridwar in compliance of the order of this Tribunal dated 12.01.2023 has submitted the affidavit with the facts that:

“xxxxxx.....xxx

6. *That in compliance of directions passed by this Hon’ble Tribunal, the instructions are issued by the Deponent/District Magistrate, Haridwar to all the Sub Divisional Magistrates of the District Haridwar, **to ensure the compliance of the directions passed by this Hon’ble Tribunal**, and all the Sub Divisional Magistrates had submitted their reports, and on the basis of the reports of Sub Divisional Magistrates, it is respectfully submitted that all the brick kilns **situated in the District Haridwar are totally closed**. True copies of the order dated 12.7.2023 issued by the District Magistrate, Haridwar, Uttarakhand alongwith letters/reports received from the respective Sub Divisional Magistrates of District Haridwar, Uttarakhand are annexed hereto and marked as Annexure-2.*

7. *That it is also respectfully submitted that the undertakings have also been received from all the brick kilns owners of the District Haridwar, that whenever they will restart their respective unit/brick kiln, they **will start after complying and by taking all the consents/permissions according to rules, regulations in view of the relevant laws**.*

14. The compliance report submitted by the State PCB and District Magistrate makes it clear that the directions issued from the CPCB and MoEF&CC had been complied and those brick kilns having no consent conditions or consent order have been closed and closure order has been issued by the competent authority.

I.A. Nos. 172/2023, 173/2023, 174/2023 and 175/2023

15. The applicant in IA No. 172/2023 has submitted that he had applied for formal consolidated consent on 09.12.2022 and for all practical

purposes, the applicant had complied with all the requirements, conditions and regulations under the Water Act, 1974 and the Air Act, 1981 and the Hazardous Waste Rules, 2016 and the consent order was obtained and issued by the competent authority on 12.01.2023 and in the meantime, the order was passed by this Tribunal and he was restrained to operate the brick kiln. The respondent, State PCB is directed to consider the application of the applicant in IA No. 172/2023 and in case of consent order and compliances of conditions, suitable order be issued in accordance with law.

16. On the similar footing, the applicant in IA No. 173/2023 has submitted that he had obtained consent order and complied with the Water Act and Air Act. Similarly, the applicants in IA Nos. 174 and 175 of 2023, submitted that they are complying with consent conditions and consent orders have been issued by the competent authority. In all these cases, the applicants in IAs are directed to submit their applications/representation before the State PCB and State PCB is directed to independently consider the application, after giving an opportunity of hearing. In case of compliances of the conditions and violating of consent order, appropriate decision may be taken as early as possible within 30 days. Any person aggrieved by the order have liberty to file an appeal or revision before appropriate forum. All Interim Applications stand disposed of.

17. Learned counsel appearing for the State PCB has argued that some directions have been issued in OA No. 1016/2019, *Utkarsh Panwar vs. Central Pollution Control Board & Ors.* vide order dated 17.02.2021 in which it has been directed that:

“xxxxxx.....xxx

iii. However, the Zig-Zag type brick kilns may be asked to comply with the proposed Particulate matter standards of 250 mg/Nm³ at 17 % O₂ w.r.t. stack emissions of Particulate Matter (PM). State Pollution Control Boards may ensure operation of only permitted number of Zig-Zag type brick kilns and compliance of PM emission norms of 250 mg/Nm³ at 17 % O₂.

xxx.....xxx.....xxx

v. The selection of brick kilns which can be operated, should be made in such a manner that there is distance of 500 mtr between two operational brick kilns, so as to ensure minimum localized impact on the ambient air.

vii. In view of the carrying capacity limitations simultaneous operation of all the brick kilns may not be advisable, therefore, staggered permission for operation may be given to the existing brick kilns in such a way that only estimated number of brick kilns in area operate during any given time.

xxx.....xxx.....xxx

viii. However, all Zig-Zag brick kilns may be considered to perform upstream activities such as green brick manufacturing, stacking of green bricks, etc. during non-firing period.

ix. In the districts, where ambient air quality data for the past is not available, due to non-availability of CAAQMS, the data of the districts having comparable population and geographical area, may be used for estimating the number of brick kilns which can be operated without affecting the ambient air quality.

x. In order to control fugitive dust emissions, adequate measures such as sprinkling of water must be taken and compliance of the conditions of the Consent to Operate/guidelines issued by concerned SPCB must be ensured.

xi. References w.r.t. use of Piped Natural Gas (PNG), as fuel in brick manufacturing are available, but in Tunnel type brick Kilns. It is, therefore, recommended that a techno-economic feasibility study may be conducted by an expert agency, for making an assessment w.r.t. use PNG and other cleaner fuels such as internal fuels, with different types of firing technologies, for making brick manufacturing sustainable and environmental friendly, at locations where such fuels are available.”

xxx.....xxx.....xxx

18. In the context of banning sale of crackers having adverse impact on the air quality, it was held that **even if there were several sources of pollution, a particular polluting activity could be prohibited**. No equality could be pleaded in this regard. Right to trade was not absolute and could be restricted for protection of Environment which was a specific Directive Principle of State Policy enforcement of which was a reasonable restriction on fundamental right to trade. The 'Precautionary Principle' of environmental law allows prohibition of a polluting activity even in absence of scientific certainty. Relevant extracts are as follows:-

“37 The aforesaid findings are sufficient to negate the arguments of the opposite side that there is absence of scientific study about the adverse effect of firecrackers during Diwali. In environmental law, “precautionary principle” is one of the well-recognised principles which is followed to save the environment. It is rightly argued by the petitioners that this principle does not need exact studies/material. The very word “precautionary” indicates that such a measure is taken by way of precaution which can be resorted to even in the absence of definite studies. In *Vellore Citizens' Welfare Forum [Vellore Citizens' Welfare Forum v. Union of India, (1996) 5 SCC 647]*, this Court explained the principle in the following manner: (SCC pp. 658 & 660, paras 11 & 14-16)

“11. Some of the salient principles of “Sustainable Development”, as culled out from Brundtland Report and other international documents, are Inter-Generational Equity, Use and Conservation of Natural Resources, Environmental Protection, the Precautionary Principle, Polluter Pays Principle, Obligation to Assist and Cooperate, Eradication of Poverty and Financial Assistance to the developing countries. We are, however, of the view that “the precautionary principle” and “the polluter pays principle” are essential features of “Sustainable Development”. The “precautionary principle” — in the context of the municipal law — means:

(i) Environmental measures — by the State Government and the statutory authorities — must anticipate, prevent and attack the causes of environmental degradation.

(ii) **Where there are threats of serious and irreversible damage, lack of scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.**

(iii) The “onus of proof” is on the actor or the developer/industrialist to show that his action is environmentally benign.

14. In view of the abovementioned constitutional and statutory provisions we have no hesitation in holding that the precautionary principle and the polluter pays principle are part of the environmental law of the country.

15. Even otherwise once these principles are accepted as part of the Customary International Law there would be no difficulty in accepting them as part of the domestic law. It is almost an accepted proposition of law that the rules of Customary International Law which are not contrary to the municipal law shall be deemed to have been incorporated in

the domestic law and shall be followed by the courts of law. To support we may refer to H.R. Khanna, J.s' opinion in ADM, *Jabalpur v. Shivakant Shukla* [ADM, *Jabalpur v. Shivakant Shukla*, (1976) 2 SCC 521] , Jolly George Varghese case [*Jolly George Varghese v. Bank of Cochin*, (1980) 2 SCC 360] and Gramophone Co. case [*Gramophone Co. of India Ltd. v. Birendra Bahadur Pandey*, (1984) 2 SCC 534 : 1984 SCC (Cri) 313] .

16. The constitutional and statutory provisions protect a person's right to fresh air, clean water and pollution-free environment, but the source of the right is the inalienable common law right of clean environment. ...”

38. The precautionary principle accepted in the aforesaid judgment was further elaborated in A.P. Pollution Control Board case [*A.P. Pollution Control Board v. M.V. Nayudu*, (1999) 2 SCC 718] as under: (SCC pp. 732-34, paras 31-35)

“31. The “uncertainty” of scientific proof and its changing frontiers from time to time has led to great changes in environmental concepts during the period between the Stockholm Conference of 1972 and the Rio Conference of 1992. In *Vellore Citizens' Welfare Forum v. Union of India* [*Vellore Citizens' Welfare Forum v. Union of India*, (1996) 5 SCC 647] a three-Judge Bench of this Court referred to these changes, to the “precautionary principle” and the new concept of “burden of proof” in environmental matters. Kuldip Singh, J. after referring to the principles evolved in various international conferences and to the concept of “sustainable development”, stated that the precautionary principle, the polluter pays principle and the special concept of onus of proof have now emerged and govern the law in our country too, as is clear from Articles 47, 48-A and 51-A(g) of our Constitution and that, in fact, in the various environmental statutes, such as the Water Act, 1974 and other statutes, including the Environment (Protection) Act, 1986, these concepts are already implied. The learned Judge declared that these principles have now become part of our law. The relevant observations in *Vellore case* [*Vellore Citizens' Welfare Forum v. Union of India*, (1996) 5 SCC 647] in this behalf read as follows: (SCC p. 660, para 14)

‘14. In view of the abovementioned constitutional and statutory provisions we have no hesitation in holding that the precautionary principle and the polluter pays principle are part of the environmental law of the country.’

The Court observed that even otherwise, the abovesaid principles are accepted as part of the customary international law and hence there should be no difficulty in accepting them as part of our domestic law. In fact, on the facts of the case before this Court, it was directed that the authority to be appointed under Section 3(3) of the Environment (Protection) Act, 1986

‘shall implement the “precautionary principle” and the “polluter pays principle”’.

The learned Judges also observed that the new concept which places the burden of proof on the developer or industrialist who is proposing to alter the status quo, has also become part of our environmental law.

32. The Vellore [Vellore Citizens' Welfare Forum v. Union of India, (1996) 5 SCC 647] judgment has referred to these principles briefly but, in our view, it is necessary to explain their meaning in more detail, so that courts and tribunals or environmental authorities can properly apply the said principles in the matters which come before them.

33. **A basic shift in the approach to environmental protection occurred initially between 1972 and 1982. Earlier, the concept was based on the “assimilative capacity” rule as revealed from Principle 6 of the Stockholm Declaration of the U.N. Conference on Human Environment, 1972. The said principle assumed that science could provide policy-makers with the information and means necessary to avoid encroaching upon the capacity of the environment to assimilate impacts and it presumed that relevant technical expertise would be available when environmental harm was predicted and there would be sufficient time to act in order to avoid such harm. But in the 11th Principle of the U.N. General Assembly Resolution on World Charter for Nature, 1982, the emphasis shifted to the “precautionary principle”, and this was reiterated in the Rio Conference of 1992 in its Principle 15 which reads as follows:**

‘Principle 15.—In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for proposing cost-effective measures to prevent environmental degradation.’

34. In regard to the cause for the emergence of this principle, Charmian Barton, in the article earlier referred to in “The Status of the Precautionary Principle in Australia” [(1998) 22 Harvard Environmental Law Review 509 at p. 547] says:

‘There is nothing to prevent decision-makers from assessing the record and concluding that there is inadequate information on which to reach a determination. If it is not possible to make a decision with “some” confidence, **then it makes sense to err on the side of caution and prevent activities that may cause serious or irreversible harm.** An informed decision can be made at a later stage when additional data is available or resources permit further research. To ensure that greater caution is taken in environmental management, implementation of the principle through judicial and legislative means is necessary.’

In other words, the inadequacies of science is the real basis that has led to the precautionary principle of 1982. It is based on the theory that it is better to err on the side of caution and prevent environmental harm which may indeed become irreversible.

35. The principle of precaution involves the anticipation of environmental harm and taking measures to avoid it or to choose the least environmentally harmful activity. It

is based on scientific uncertainty. Environmental protection should not only aim at protecting health, property and economic interest but also protect the environment for its own sake. Precautionary duties must not only be triggered by the suspicion of concrete danger but also by (justified) concern or risk potential. The precautionary principle was recommended by the UNEP Governing Council (1989). The Bomako Convention also lowered the threshold at which scientific evidence might require action by not referring to “serious” or “irreversible” as adjectives qualifying harm. However, summing up the legal status of the precautionary principle, one commentator characterised the principle as still “evolving” for though it is accepted as part of the international customary law, ‘the consequences of its application in any potential situation will be influenced by the circumstances of each case’. (See First Report of Dr. Sreenivasa Rao Pemmaraju — Special Rapporteur, International Law Commission dated 3-4-1998, paras 61 to 72.)”

(emphasis in original)

39. In such cases which pertain to the protection of environment, thrusting of “onus of proof” on the developer/industrialist in Vellore Citizens' Welfare Forum [Vellore Citizens' Welfare Forum v. Union of India, (1996) 5 SCC 647] was also elaborated by the Court in the following manner: (A.P. Pollution Control Board case [A.P. Pollution Control Board v. M.V. Nayudu, (1999) 2 SCC 718] , SCC pp. 734-35, paras 36-38)

“36. We shall next elaborate the new concept of burden of proof referred to in Vellore case [Vellore Citizens' Welfare Forum v. Union of India, (1996) 5 SCC 647] at p. 658. In that case, Kuldeep Singh, J. stated as follows: (SCC p. 658, para 11)

‘(iii) The “onus of proof” is on the actor or the developer/industrialist to show that his action is environmentally benign.’

37. It is to be noticed that while the inadequacies of science have led to the “precautionary principle”, the said “precautionary principle” in its turn, has led to the special principle of burden of proof in environmental cases where burden as to the absence of injurious effect of the actions proposed, — is placed on those who want to change the status quo (Wynne, “Uncertainty and Environmental Learning: Reconceiving Science and Policy in the Preventive Paradigm” [(1992) 2 Global Environmental Change 111 at p. 123]). This is often termed as a reversal of the burden of proof, because otherwise in environmental cases, those opposing the change would be compelled to shoulder the evidentiary burden, a procedure which is not fair. Therefore, it is necessary that the **party attempting to preserve the status quo by maintaining a less polluted state should not carry the burden of proof and the party who wants to alter it, must bear this burden.** (See James M. Olson, “Shifting the Burden of Proof: How the Common Law can Safeguard Nature and Promote an Earth Ethic” [(1990) 20

Environmental Law 891 at p. 898] .) (Quoted in “The Status of the Precautionary Principle in Australia” [(1998) 22 *Harvard Environmental Law Review* 509 at p. 547] at pp. 519, 550.)

38. The precautionary principle suggests that where there is an identifiable risk of serious or irreversible harm, including, for example, extinction of species, widespread toxic pollution in major threats to essential ecological processes, it may be appropriate to place the burden of proof on the person or entity proposing the activity that is potentially harmful to the environment. (See Report of Dr Sreenivasa Rao Pemmaraju, Special Rapporteur, International Law Commission, dated 3-4-1998, Para 61.)”
(emphasis in original)

41. It may be stressed that in Vellore Citizens' Welfare Forum case [Vellore Citizens' Welfare Forum v. Union of India, (1996) 5 SCC 647] , this Court had banned the tanneries when it was found that they were causing immense damage to the environment. Thus, environment protection, which is a facet of Article 21, was given supremacy over the right to carry on business enshrined in Article 19(1)(g). We state at the cost of repetition that right to health, which is recognised as a facet of Article 21 of the Constitution and, therefore, is a fundamental right, assumes greater importance. It is not only the petitioners and other applicants who have intervened in support of the petitioners but the issue involves millions of persons living in Delhi and NCR, whose right to health is at stake. However, for the time being, without going into this debate in greater details, our endeavour is to strive at balancing of two rights, namely, right of the petitioners under Article 21 and right of the manufacturers and traders under Article 19(1)(g) of the Constitution.

44. Applying the aforesaid principle, in the first blush it may appear that the aforesaid argument has substantial force in it. However, that would be only one side of the picture as there are two contra-arguments which are sufficient to take the sheen out of the aforesaid plea. First aspect is that the argument of economic hardship is pitched against right to health and life. **When the Court is called upon to protect the right to life, economic effect of a particular measure for the protection of such right to health will have to give way to this fundamental right. Second factor, which is equally important, is that the economic loss to the State is pitched against the economic loss in the form of cost of treatment for treating the ailments with which people suffer as a result of burning of these crackers. Health hazards in the form of various diseases that are the direct result of burning of crackers have already been noted above. It leads to asthma, coughing, bronchitis, retarded nervous system breakdown and even cognitive impairment. Some of the diseases continue on a prolonged basis. Some of these which are caused because of high level of PM_{2.5} are even irreversible. In such cases, patients may have to continue to get the medical treatment for much longer period and even for life. Though**

there are no statistics as to what would be the cost for treating such diseases which are as a direct consequence of fireworks on these occasions like Diwali, it can safely be said that this may also be substantial. It may be more than the revenue which is generated from the manufacturers of the crackers. However, we say no more for want of precise statistical data in this behalf.”

Carrying Capacity Concept

19. Carrying capacity is a facet of sustainable development. It is inherent in ‘Precautionary Principle’ as well as in ‘Inter-generational Equity’. In *MC Mehta v. UOI & Ors.*¹, **construction activity in the catchment area of Badkhal were directed to be restricted/regulated to the level of Carrying capacity.** It was observed that:-

“Preventive measures have to be taken keeping in view of the carrying capacity of the ecosystem operating in the environmental surroundings under consideration.”

20. In *Vellore Citizens’ Welfare Forum v. UOI & Ors.*², it was observed that quality of human life is to be improved within the carrying capacity to supporting ecosystem. Relevant extract is as follows:-

“10..... During the two decades from Stockholm to Rio “Sustainable Development” has come to be accepted as a viable concept to eradicate poverty and improve the quality of human life while living within the carrying capacity of the supporting ecosystems. “Sustainable Development” as defined by the Brundtland Report means “Development that meets the needs of the present without compromising the ability of the future generations to meet their own needs”. We have no hesitation in holding that “Sustainable Development” as a balancing concept between ecology and development has been accepted as a part of the customary international law though its salient features have yet to be finalised by the international law jurists.”

21. These observations are reiterated in (2006) 6 SCC 371.³

Pollution from Brick kilns – shifting from coal to Natural gas as fuel

22. In *M.C. Mehta (Taj Trapezium Pollution) v. UOI & Ors.*⁴, the Hon’ble Supreme Court held that pollution caused by brick kilns in Taj Trapezium area was harmful to the Taj. Brick kilns within radius of 20 km were directed to be closed/relocated and replacement of the fuel by natural gas was suggested.⁵

¹ (1997) 3 SCC 715

² (1996) 5 SCC 647

³ Para 66 to 76

⁴ (2001) 9 SCC 235

⁵ Para 1 & 2

18. A five-member Committee was constituted in the above original application (*Utkarsh Panwar vs. Central Pollution Control Board & Ors.*) and Committee has recommended as follows:

“13. xxx.....xxx.....xxx

4. Recommendations of Expert Committee

The following mechanism is recommended by the Expert Committee, for operationalization of zig-zag type brick kilns in NCR regions:

- i. The brick kilns which have already been converted to Zig-zag technology may only be allowed to operate, **subject to the compliance of all the applicable environmental notifications, sitting guidelines, conditions of the consent to operate granted by respective State Pollution Control Boards (SPCBs) with special reference to control of fugitive dust emissions.***
- ii. The new brick kilns be allowed to operate in NCR regions, as per directions issued by CPCB vide CPCB/IPC I-VI/PNG/2862-2870 dated November 27, 2020 (Copy attached as **Annexure-10**).*
- iii. The permission to operate the brick kilns in the winter months must be subjected to the restrictions, if any, on the operation of industries, to control the concentration of particulate matter in the ambient air environment of Delhi NCR*
- iv. The CPCB in consultation with expert agencies/organisations should develop methodology for conducting stack emission monitoring in zig-zag brick kilns at monitoring the earliest. All brick kilns would be required to provide port holes and platform and ladders as finalized by CPCB.*
- v. It is recommended that training programmes on standard operating practices may be organized by various brick kiln associations in collaboration with expert agencies in this field. CPCB may provide technical guidance to the brick kilns associations in this regard, if required. An outline of the training programme is provided in **Annexure-9**.*
- vi. It is recommended to implement the following additional measures:*
 - One night-vision CCTV camera to be installed and focused on the exit of brick kilns stack with connectivity to SPCBs & CPCB, to ensure visual monitoring of smoke emissions.*
 - Requisite number of ambient air quality monitoring stations (AAQMS) should be installed by State Pollution Control Boards in all the districts in accordance with the criteria developed by CPCB.*
- vii. The long term sustenance of the brick kilns in NCR depends on implementation of measures **to further***

improve design and operation of existing zig-zag kilns for pollution prevention at source and improve resource use efficiency. The committee has given suggestions, based on which applied research and pilot demonstration can be taken up besides developing a Roadmap for time bound implementation.”

14. The report also annexes a study of Tunnel kiln technology, using PNG as fuel, employed by M/s Wienerberger Building Solutions Private Limited, KIADB Industrial Area, Kunigal, Karnataka, **(which has not been found viable by the Committee)**, as follows:-

“5.0 Plant Description:

M/s Wienerberger Building Materials Solutions Private Limited, a Brick Manufacturer founded in 1819 in Vienna, Austria, is having 204 plants spread across 30 countries, is engaged in using natural, eco-friendly building material of international quality standards. The unit located in Plot No. 1 & 2, Kunigal Industrial Area, Phase II, Gottikere Village, Kunigal, Karnataka has Tunnel kiln, a continuous moving ware kiln technology. Wienerberger at Kunigal is the production facility, 70 kms from Bangalore, is Austria-based Wienerberger’s first Asian manufacturing unit. The fully automated, state-of-the-art facility manufactures bricks called porotherm perforated clay bricks. The environment friendly production unit runs 365 days a year, producing 450 tonnes of bricks per day. Quality is ensured by the latest European production equipments 24 hour factory production control with in-house laboratory for chemical and physical tests of raw materials and finished products. The unit makes different types of horizontal and vertical perforated light weight clay bricks. The porotherm horizontally perforated light weight clay bricks has following advantages:

- Weighs 60 % less than conventional walling material
- Compressive strength $\geq 3.5 \text{ N/mm}^2$
- Density of approx. $700\text{-}800 \text{ kg/m}^3$
- Conveniently large and light weight bricks
- Excellent thermal insulation
- Low water absorption ~ 15%

Brick is a 100 % natural clay product with natural additives like coal ash, rice husk and granites slurry. No toxic or any chemical additives are used, thereby free from toxic gases.”

19. In the light of above observations, we conclude that in severe air quality condition, coal fired brick kilns cannot be allowed to operate even zig zag technology is used and improved procedures are followed, as suggested by the Committee unless there is a switch over to the PNG. Compliance by an individual brick kiln, otherwise contributing to pollution load beyond carrying capacity, does not confer a right to continue such activity, when such activity attracts GRAP in ‘severe’ air quality condition.

20. Learned Counsel appearing for the applicant has submitted that inspite of affidavit submitted by District Magistrate, Haridwar, brick kilns are in operation without any authority. We have gone through the report submitted by the State PCB and the affidavit submitted by Collector with the facts that the brick kilns which have no consent order have been totally closed and the unit of brick kilns must have to comply the conditions and must obtain consent order from the competent authority and without compliance of consent conditions and order from the State PCB, no other brick kiln can be permitted to operate against the rules.

21. In view of above, we direct the State PCB to continuously monitor the operation of illegal brick kilns and to ensure that no brick kiln shall be allowed to operate without any authority in violation of the Air Act, 1981 and the Water Act, 1974. The units which have valid consent, their application/representation must be considered within a timeframe according to law. It should be ensured that Notification of MoEF&CC dated 22.02.2022 on Brick Kilns be complied with and further months/period of operation with their numbers be regulated as per GRAP corresponding to Air Quality Index.

22. The Original Application stands disposed of accordingly.

Sheo Kumar Singh, CP

Arun Kumar Tyagi, JM

Dr. A. Senthil Vel, EM

July 18, 2023
Original Application No. 783/2022
(I.A. No. 172/2023, I.A. No. 173/2023,
I.A. No. 174/2023 & I.A. No. 175/2023)
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