

IN THE SUPREME COURT OF INDIA
CIVIL ORIGINAL JURISDICTION

I.A. NO.4

IN

WRIT PETITION (CIVIL) No.728 OF 2015

ARJUN GOPAL AND ORS.

.. PETITIONER (S)

VERSUS

UNION OF INDIA & ORS.

..RESPONDENT (S)

ORDER

The petitioners have approached this Court seeking emergent reliefs in relation to the extreme air pollution in the National Capital Region (hereinafter "NCR").

2. We have heard Mr. K.K. Venugopal and Ms. Vibha Datta Makhija, learned senior counsel for the petitioners and Mr. C.A. Sundaram, learned senior counsel for the respondent. The petitioner has sought wide ranging reliefs against the use of fireworks (including fire crackers), prevention of harmful crop burning, dumping of malba and further steps towards environmental purity. We have, however, restricted this order to grant of interim relief in respect of fireworks.

3. The primary contention of the petitioners is that the use of fireworks in the NCR has posed a serious problem to the inhabability of the air during Diwali and the wedding season. According to the petitioners, the problem has reached proportions in the NCR which are not tolerable and are causing immense harm to the peace, well-being and health both physical and mental. In fairness, we must say that there was no serious opposition to the impact of fireworks on the ambient air and the unhealthy effects of fireworks on it. The opposition was mainly about the total banning of fireworks in all circumstances.

4. The onset of winter and the festival/marriage season this year, presented to the residents of NCR severe concerns regarding the air quality standards. According to reports, the air quality standards in early November of this year were the worst in the world. It is reported that the PM 2.5 levels recorded were "beyond scale" values [see *India's air quality among world's worst over Diwali weekend: Report. November 4, 2016, Hindustan Times*]. The report indicates that 24 hour average of PM 2.5 levels in South Delhi in 2016 were 38% higher than on the Diwali night of 2015. The day after Diwali, these levels were twice as high as the day after Diwali in 2015, crossing 650 $\mu\text{g}/\text{m}^3$, which is 26 times above the WHO's standards or levels considered safe. Shockingly, on the morning of 1.11.2016, Delhi woke up to an average PM 2.5 level of over 700 $\mu\text{g}/\text{m}^3$ —some of the highest

levels recorded the world over and 29 times above WHO standards. The report further states that the WHO guideline for 24-hour average PM 2.5 levels is $25 \mu\text{g}/\text{m}^3$ and with an annual average PM 2.5 level of $122 \mu\text{g}/\text{m}^3$, Delhi's air is the worst among global megacities with dense populations. We have particularly referred to the PM 2.5 levels because of the extreme effects and near invisibility of this type of particulate matter. PM 2.5 or particulate matter 2.5 (PM2.5), refers to tiny particles or droplets in the air that are two and one half microns or less in width. It may be noted that the widths of the larger particles in the PM2.5 size range would be about thirty times smaller than that of a human hair. These particles primarily emanate from vehicle exhausts and other operations that involve the burning of fuels such as wood, heating oil or coal, and of course, use of fire crackers.

5. 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. The gradation of AQI and its health impact is extracted below:

Table -1

AQI	Associated Health Impacts
Good (0-50)	Minimal Impact
Satisfactory (51-100)	May cause minor breathing discomfort to sensitive people.
Moderately polluted (101-200)	May cause breathing discomfort to people with lung disease such as asthma, and discomfort to people with heart disease, children and older adults.
Poor (201-300)	May cause breathing discomfort to people on prolonged exposure, and discomfort to people with heart disease
Very Poor (301-400)	May cause respiratory illness to the people on prolonged exposure. Effect may be more pronounced in people with lung and heart diseases.
Severe (401-500)	May cause respiratory impact even on healthy people, and serious health impacts on people with lung/heart disease. The health impacts may be experienced even during light physical activity.

Table -2

AQI Category, Pollutants and Health Breakpoints								
AQI Category (Range)	PM ₁₀ 24-hr	PM _{2.5} 24-hr	NO ₂ 24-hr	O ₃ 8-hr	CO 8-hr (mg/m ³)	SO ₂ 24-hr	NH ₃ 24-hr	Pb 24-hr
Good (0-50)	0-50	0-30	0-40	0-50	0-1.0	0-40	0-200	0-0.5
Satisfactory (51-100)	51-100	31-60	41-80	51-100	1.1-2.0	41-80	201-400	0.5-1.0
Moderately polluted (101-200)	101-250	61-90	81-180	101-168	2.1- 10	81-380	401-800	1.1-2.0
Poor (201-300)	251-350	91-120	181-280	169-208	10-17	381-800	801-1200	2.1-3.0
Very poor (301-400)	351-430	121-250	281-400	209-748*	17-34	801-1600	1200-1800	3.1-3.5
Severe (401-500)	430+	250+	400+	748+*	34+	1600+	1800+	3.5+

6. Reports indicate that the AQI in Delhi was much above the severe standard, shooting off the AQI 500 mark on many days this November. On the day after Diwali, it was more than 14 times the safe limits [see *Delhi's pollution levels peaks at 14-16 times safe limits, 31.10.2016, The Hindu*]. The adverse health effects of these hazardous levels of pollution are only too evident from the table given above. We do not intend to refer to the multiplicity of reports and data on this front.

7. The hazardous levels of air pollution in the last few weeks has spared very few from its ill effects. The life of the citizens of NCR was brought to a virtual standstill, not to speak about the plight of the

thousands of mute flora and fauna in NCR. Schools were declared shut, denizens of the city advised to stay indoors, construction activities stopped, power stations shut and ban imposed on burning of garbage and agricultural waste. The fall in air quality has had a significant impact on people's lifestyle as well. The rising costs to protect against air pollution are substantial. It has come to our notice that people are queuing up to purchase protective masks and air purification systems in the wake of dense smog all over the NCR. In short, the capital was 'smogged' into an environmental emergency of unseen proportions.

8. 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 [see *Delhi Wakes up to an Air Pollution Problem It Cannot Ignore, 15.2.2015, The New York Times*]. 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 percent of the school children suffer from lung damage [see

Landmark Study Lies Buried, 2.4.2015, The Indian Express]. We note with apprehension that there are nascent studies that suggest that pollution can [lower children's I.Q.](#), hurt their [test scores](#) and increase the risks of [autism](#), [epilepsy](#), [diabetes](#) and even adult-onset diseases like [multiple sclerosis](#)[see *Holding Your Breath in India*, 29.5.2015, *The New York Times*].

9. It has been brought to our notice that the severe air pollution in the NCR is leading to multiple diseases and other health related issues amongst the people. It is said that the increase in respiratory diseases like asthma, lung cancer, bronchitis etc. is primarily attributable to the worsening air quality in the NCR. The damage being caused to people's lungs is said to be irreversible. Other health related issues like allergies, temporary deafness are also on the rise. Various experts have pointed towards multiple adverse effects of air pollution on human health like premature deaths, rise in mortality rates, palpitation, loss of vision, arthritis, heart ailments, cancer, etc.

10. When we refer to these extreme effects, we are not merely referring to the inconvenience caused to people, but to abject deprivation of a range of constitutionally embedded rights that the residents of NCR 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 Court is

constitutionally bound to address their grave concerns. May we remind ourselves, that this is not the first time that this court was impelled into ensuring clean air for the citizens of the capital region [see *M.C. Mehta vs. Union of India: 1998(6) SCC 60 and 1998(9) SCC 589; M.C. Mehta vs. Union of India 1998 (8) SCC 648; M.C. Mehta vs. Union of India 1998(8) SCC 206*].

11. During the festival- marriage season in Delhi, that is between October and February, a report suggests that more than 40 recognized and other dangerous forms of firecrackers are used [see *Fireworks make Diwali a Dangerous Festival for All, 4.11.2015, Down to Earth*]. These fireworks release a deadly concoction of fumes into an almost-still winter air in Delhi, causing extreme air pollution during this time. These fire crackers apart from causing acute air pollution also cause severe noise pollution. A study suggests that fireworks emit fine particles of various elements like Copper, Barium, Strontium, Magnesium and Potassium, all of which are used to provide the colour and glitter to fireworks [see *The Impact of Fireworks on Airborne Particles, Atmospheric Environment, Volume 42, Issue 6, 2008, pages 1121-1132*].

12. The latest report¹ by the Central Pollution Control Board (CPCB) on the ambient air quality during the Diwali period shows that air pollution across the capital has reached record levels and has become

¹ CPCB Deepawali Monitoring Report, 2016

intolerable. We find that the air quality in NCR is mostly poor as per the standards prescribed by the Government of India, but it becomes much worse during Diwali. The concentrations of PM 2.5 and PM 10 which are indicators of air quality have shown considerable increase in the region. The following tables show the actual PM 2.5 and PM 10 levels in Delhi during the Diwali 2016 period according to the CPCB report.

TABLE - 3

PM 10 (in µg/m³) LEVELS IN DELHI				
STATION	PRE - DIWALI		DIWALI DAY	
	2015	2016	2015	2016
ITO	166	203	531	878
PITAMPURA	161	368	460	1297
JANAKPURI	119	213	554	902
PARIVESH BHAWAN	166	324	593	1183
DILSHAD GARDEN	NA	NA	NA	NA
SHADIPUR	NA	NA	NA	NA
NSIT, DWARKA	NA	NA	NA	NA
R K PURAM	NA	346	NA	454
MANDIR MARG	NA	236	NA	428
PUNJABI BAGH	NA	236	NA	779
ANAND VIHAR	NA	644	NA	1084
AVERAGE	153	321.25	534.5	875.62

TABLE - 4

PM 2.5 (in µg/m³) LEVELS IN DELHI				
STATION	PRE - DIWALI		DIWALI DAY	
	2015	2016	2015	2016
ITO	NA	104	NA	797
PITAMPURA	117	102	435	1238
JANAKPURI	84	96	459	842
PARIVESH BHAWAN	96	84	474	958
DILSHAD GARDEN	78	119	192	602
SHADIPUR	108	62	121	474
NSIT, DWARKA	191	118	99	457
R K PURAM	NA	144	NA	285
MANDIR MARG	NA	92	NA	296
PUNJABI BAGH	NA	108	NA	402
ANAND VIHAR	NA	178	NA	430
AVERAGE	112.33	109.72	296.67	616.45

13. The CPCB report indicates that air pollution levels across the region rises by about 4–5 times on Diwali as a consequence of burning of fireworks. Numerous accidents take place due to unregulated manufacture, storage and transport of fireworks resulting in substantial damage to life and property. Further, unsupervised bursting of fireworks also leads to many accidents where unfortunately most victims are children. They are a source of both, air pollution and noise

pollution. Something that is meant to be a celebration seems to be destroying the peace and tranquility which is necessary for rest.

14. Grievance was made before us about the thousands, even a lakh of crackers on one string going off at night; and several such strings going off in the neighborhood, totally unmindful of the aged, the tender and the ill. All this fireworks, even that which is not noisy, leaves the ambient air thick with noxious particles. Marriage processions, *barats*, passing through an area generated the same kind of noise and leave behind the same kind of air, by the use of fire crackers. It is not necessary to speculate if those who suffer send their good wishes for the event, or to those 'celebrating' Diwali in this way.

15. We are conscious that we are dealing with time honoured ways of celebrating certain occasions. The petitioners and every member of the Bench and the Bar also celebrate in the same way. But does that justify the continuance of this manner of celebration, when the quality of air in the region is so poor and injurious to health and well being and is destroying essential components of the freedom to live a healthy life? In any case till the quality of air improves we do not pronounce finally on this question at this stage.

16. It is however certain that, now, when the Air Quality Index in the NCR is abysmally and threateningly severe, allowing free trade in fireworks which is a major source of noise and air pollution and is

causing immense harm to the lives and health of citizens, and allowing availability of such fireworks or explosives constitutes a serious invasion of the Freedoms and Rights conferred on citizens by Part III of the Constitution of India. Such an invasion is all the more deleterious towards the rights and freedom of the poor and the underprivileged who must breathe such air without any means of protecting themselves.

17. There is no doubt that protecting citizens (including those who use fireworks) by making these unavailable in the market would require the suspension of trade of a miniscule section of the population. Maybe they have acquired stocks for sale or obtained credit for their business. We are however of the view, that balancing the vital interests of the vast majority of citizens against the commercial interests of a few, the balance must heavily tilt in favour of citizens in general.

18. We are aware that we are only issuing interim directions, and much is left to be heard, discussed and said about the rival claims and contentions. What is however indisputable is that the harmful effects of fireworks on the ambient air and the lungs, eyes and ears of people. What is also obvious is the extreme nuisance, noise the fireworks cause to citizens particularly the ailing and the aged. Therefore, though much can be argued as always about the significance and even

joy of bursting fireworks. But at the same, prima facie, a just constitutional balance, must overwhelmingly prioritize the harmful effects of this hazardous air on present and future generations, irreversible and imperceptible as they are, over the immediate commercial constraints of the manufacturers and suppliers of fireworks. Secondly, this court recognizes that the duty to ensure a healthy environment not only falls on the State in terms of Article 48-A of the Constitution of India but also on all citizens under Article 51A (g) of the Constitution. This Court has previously held that fundamental duties in Part IV A of the Constitution could be a guiding factor in testing the reasonableness of restrictions under Article 19(2)-(6) of the Constitution of India [See State of Gujarat v. Mirzapur Moti Kureshi Kassab Jamat, (2005) 8 SCC 534; para 58] The principle of inter-generational equity, recognized and applied by this Court in a number of decisions, beaconing us to the health and needs of the future generation, also favours the issuance of interim directions. Lastly, the precautionary principle, affirmed by this court in Vellore Citizens Welfare Forum v. Union of India, (1996) 5 SCC 647, mandates that 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.

19. We thus consider it inappropriate that explosives which are used as fireworks should be available in the market in the NCR till further

orders. The mechanism of the law in this regard is clear. Rule 118² of the Explosive Rules, 2008, framed under the Explosives Act, 1884 provides for the manner in which licenses issued under the Explosives Act to store and sell explosives could be suspended or cancelled. Sub-Rule(5) thereof specifically confers on the Central Government a power to suspend or cancel a license if it considers that it is in public interest. This provision also makes it clear that an opportunity to hear the licensee could be dispensed with if the Central Government considers that in public interest. This Court finds that the grave air quality situation in NCR is one such case, where this Court, can intervene and suspend the licenses to store and sell fireworks in the NCR. We direct the Central Government to:-

². **Suspension and revocation or cancellation of licence.**—(1) Every licence granted under these rules shall— (I) stand cancelled, if— (a) the licensee has ceased to have any right for the lawful possession over the licensed premises; (b) the licensee is convicted and sentenced under any criminal offences or ordered to execute under Chapter VIII of the Code of Criminal Procedure, 1973 (2 of 1974), a bond for keeping peace for good behaviour. (II) stand cancelled, if the no-objection certificate is cancelled by the authority issuing the same or District Magistrate or the State Government in accordance with rule 115. (III) be liable to be suspended or cancelled by an order of the licensing authority for any contravention of the Act or these rules or of any condition contained in such licence, or by order of the Central Government, if it is satisfied that there are sufficient grounds for doing so: Provided that before suspending or cancelling a licence under this rule, the holder of the licence shall be given an opportunity of being heard. (2) The suspension or cancellation shall take effect from the date specified therein. (3) An order of suspension or revocation of a licence shall be deemed to have been served if sent by post to the address of the licensee entered in the licence. (4) The suspension of a licence shall not debar the holder of the licence from applying for the renewal. (5) Notwithstanding anything contained in sub-rule (1), an opportunity of being heard may not be given to the holder of the licence before his licence is suspended or cancelled in cases—(i) where the licence is suspended by a licensing authority as an interim measure for violation of any of the provisions of the Act or these rules or of any conditions contained in such licence and in his opinion such violation is likely to cause imminent danger to the public: Provided that where a licence is so suspended, the licensing authority shall give the holder of the licence an opportunity of being heard before the order of suspension is confirmed; or (ii) where the licence is suspended or cancelled by the Central Government, if that Government considers that in the public interest or in the interest of the security of the State, such opportunity should not be given. (6) A licensing authority or the Central Government suspending or cancelling a licence shall record its reason for so doing in writing.

- (i) Suspend all such licenses as permit sale of fireworks, wholesale and retail within the territory of NCR.
- (ii) The suspension shall remain in force till further orders of this Court.
- (iii) No such licenses shall be granted or renewed till further orders.

20. In addition to the above, we direct the CPCB to study and prepare a report on the harmful effects of the materials which are currently being used in the manufacture of fireworks. The report shall be submitted within a period of three months to this Court.

.....CJI
[T.S. THAKUR]

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[A.K. SIKRI]

.....].
[S.A. BOBDE]

NEW DELHI,
NOVEMBER 11, 2016