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## **SUPREME COURT BAN ON DIESEL VEHICLES: WHETHER THE LAW ON ABATEMENT OF AIR POLLUTION IN INDIA HAS BEEN EFFECTIVE?**

*Dr. Sairam Bhat and Sharan Balakrishna*

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## **SUPREME COURT BAN ON DIESEL VEHICLES: WHETHER THE LAW ON ABATEMENT OF AIR POLLUTION IN INDIA HAS BEEN EFFECTIVE?**

*Dr. Sairam Bhat\* and Sharan Balakrishna\*\**

### **INTRODUCTION**

In the 1980s, the city of Delhi gained an infamous reputation for really high levels of pollution and rapidly decreasing air quality and at the time several Public Interest Litigations by famed environmental lawyer M.C. Mehta, saw the enactment of a slew of long term measures that significantly improved the air quality in Delhi. In the first among many measures in which judicial activism was exercised by the Supreme Court, heavy industries such using brick kilns or induction furnaces in NCR Delhi were mandated to either switch to cleaner fuels such as CNG or relocate outside the NCR.<sup>1</sup> The Court then banned the further registration of auto rickshaws using two stroke petrol engines in the NCR and directed a switch to either clean fuels such as CNG or four stroke engines.<sup>2</sup>

The streak of judicial activism exercised by the Supreme Court then continued in the form of the orders dated 28<sup>th</sup> July, 1998 and 26<sup>th</sup> March, 2001 in the case of *M.C. Mehta v. Union of India & Ors*<sup>3</sup>, a Public Interest Litigation filed by environmental lawyer M.C. Mehta. The first order, passed in 1998, mandated a number of measures suggested by the Bhure Lal Committee, which was appointed to suggest measures to curb air pollution in Delhi, such as:

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1 *M.C. Mehta v. Union of India*, (2006) 3 SCC 399.

2 *M.C. Mehta v. Union of India*, (1998) 1 SCC 676.

3 *M.C. Mehta v. Union of India & Ors.*, Writ Petition (Civil) 13029 of 1985.

- ◆ Conversion of all public transport buses in Delhi to clean fuel in the form of CNG (by 31<sup>st</sup> March, 2001)
- ◆ Conversion of all buses older than 8 years to CNG (by 31<sup>st</sup> March, 2001)
- ◆ Replacement of all pre 1990s auto rickshaws and taxis to new vehicles on clean fuels (by 31<sup>st</sup> March, 2001)
- ◆ Financial incentives for replacement of all post 1990 autos and taxis with new vehicles on clean fuels (by 31<sup>st</sup> March, 2001)
- ◆ Phasing out of leaded petrol from NCT Delhi (by 9<sup>th</sup> September, 1998)
- ◆ Augmentation of public transport to 10,000 buses
- ◆ Supply of only pre-mix petrol in all petrol filling stations to two-stroke engine vehicles (by 31<sup>st</sup> December, 2000)
- ◆ New ISBTs to be built at entry points in North Delhi (by 31<sup>st</sup> March, 2001)
- ◆ GAIL to expedite and expand from 9 to 80 CNG supply outlets (by 31<sup>st</sup> March, 2000)
- ◆ CPCB/DPCC to set up new stations and strengthen existing air quality monitoring stations for critical pollutants (by 1<sup>st</sup> April, 2000)

The second order was a result of number pleas by the executive for an extension for the fulfilment of the first order passed in 1998, having been ill prepared to meet the original deadline. The Court however took a very hard stance and granted an extension of 6 months only to those parties who could show that substantial efforts were being made to procure new vehicles or convert their vehicles to CNG. Given the fact that vehicular pollution contributes 43% of all air pollution, the Supreme Court views the switch to CNG as crucial for the improvement of Delhi's air quality in the long run.

Though initially several arguments were made doubting the actual effectiveness of the use of CNG as a clean fuel, as opposed to the alternative of ultra-low sulphur diesel (ULSD), including a study by Tata Energy Research Institute<sup>4</sup> (TERI) which

4 *Diesel to CNG: From one villain to another?*, *The Hindu*, 28<sup>th</sup> March 2001, available at: <http://www.thehindu.com/2001/03/28/stories/14282181.htm>;

*The gas war hot's up*, *India Today*, April 16<sup>th</sup> 2001, available at: <http://indiatoday.intoday.in/story/cng-to-face-competition-from-ultra-low-sulphur-diesel/1/232515.html>.

was widely used by the Delhi administration to argue against the move towards CNG. However, this opposition slowly faded away as this study was shown to be inaccurate<sup>5</sup> and the move has since been hailed as an excellent step which produced the world's cleanest public bus system, and played a significant role in reducing the air pollution in Delhi.<sup>6</sup> Adding to this, the complete phasing out of leaded fuel in the capital reduced the amount of lead in the atmosphere by around 60%.<sup>7</sup>

Another example of such judicial activism on the part of the Apex Court in curbing air pollution was seen in the *Taj Trapezium Case*<sup>8</sup>, where the Court directed all industries in the vicinity of the Taj Mahal to convert to CNG fuel or relocate to outer limits of the city, directed the State Government to ensure 100% uninterrupted electricity to the Taj Trapezium Zone to prevent the use of generators, and ordered the construction of an Agra bypass road to prevent vehicles not bound for Agra from passing through it.

Reviving this streak of activism, on the 16<sup>th</sup> of December, 2015, the Supreme Court passed an order banning the registration of private diesel vehicles with an engine capacity higher than 2000cc until the 31<sup>st</sup> of March, 2016. The ban was then further extended by the Court on multiple occasions<sup>9</sup>, and then finally lifted by the Court by an order dated 12<sup>th</sup> August, 2016 after a considerable number of pleas from the

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- 5 *Clean Air: Myths and facts about CNG*, Centre for Science and Environment – Rainwater Harvesting, available at: [http://www.rainwaterharvesting.org/cse/campaign/apc/myths\\_facts/myth1.htm](http://www.rainwaterharvesting.org/cse/campaign/apc/myths_facts/myth1.htm); *Sabotage*, Down To Earth, 30<sup>th</sup> September 2001, available at: [http://www.rainwaterharvesting.org/cse/campaign/apc/myths\\_facts/myth1.htm](http://www.rainwaterharvesting.org/cse/campaign/apc/myths_facts/myth1.htm).
  - 6 *CNG Delhi – the world's cleanest public bus system running on CNG*, The Product-Life Institute, available at: <http://www.product-life.org/en/archive/cng-delhi>; Sandhya Wakdikar, *Compressed natural gas: A problem or a solution?*, CURRENT SCIENCE, VOL. 82, NO. 1, 10 JANUARY (2002); Urvashi Narain and Alan Krupnick, *The Impact of Delhi's CNG Program on Air Quality*, Resources For The Future, RFF DP 07-06, February 2007.
  - 7 GORDON MCGRANAHAN & FRANK MURRAY, AIR POLLUTION AND HEALTH IN RAPIDLY DEVELOPING COUNTRIES, 1<sup>st</sup> Ed. 2003, Earthscan Publications.
  - 8 *M.C. Mehta (Taj Trapezium Matter) v. Union of India*, (1997) 2 SCC 353.
  - 9 *Apex court extends ban on sale of large diesel cars in New Delhi*, Business Line – The Hindu, 31<sup>st</sup> March 2016, available at: <http://www.thehindubusinessline.com/news/ban-on-sales-of-luxury-diesel-cars-in-delhi-to-stay-till-april-30-apex-court/article8418076.ece>; *Supreme Court extends stay on registration of diesel vehicles above 2000 cc in Delhi-NCR region*, Indian Express, 30<sup>th</sup> April 2016, available at: <http://indianexpress.com/article/india/india-news-india/supreme-court-extends-stay-on-registration-of-diesel-vehicles-in-delhi-ncr-region-2777835/>.

Central Government and various automobile manufacturers such as Mercedes-Benz, Toyota-Kirloskar and the lobby group Society for Indian Automobile Manufacturers (SIAM), citing reasons such as a severe drop in sales and the stalling of overseas investment in the automobile market<sup>10</sup>.

This surprising reversal by the Supreme Court was accompanied by the imposition of an environmental cess of 1% on the ex-showroom price of all new private diesel vehicles with an engine capacity of 2000cc or higher. The author intends to critically analyse the judgment of the Court, the efficacy of the ban imposed by the Court and its subsequent repeal, and gauge whether the ban actually served the purpose of reducing the air pollution levels in the Delhi NCR Region. Furthermore, as similar problems are already affecting or soon will affect several other cities in India, therefore looking at possible solutions and their efficacy would prove to be invaluable in the years to come.

## ANALYSING THE DIESEL BAN

The gains of the abovementioned first switch to CNG have now largely been negated by the exponential rise in the number of vehicles in Delhi, and it now has the dubious distinction of being the most polluted city in the world.<sup>11</sup> And hence in the last couple of years, the Supreme Court has once again stepped in and begun the second wave of activism in this regard, trying to compensate the Executive's woeful inaction. In November 2015, the Court sought to use the CNG route once again and ordered all taxi aggregators using All India Tourist Permit (AITP) vehicles to mandatorily switch to CNG. Finally on 16<sup>th</sup> December, a three judge bench of the Court chaired by CJI T.S. Thakur banned the registration of private diesel vehicles with an engine capacity larger than 2000cc<sup>12</sup>. The relevant part of the judgment reads –

*“Having given our anxious consideration to the submissions made at the Bar, we are of the view that the new commercial light duty diesel vehicles can for the present*

10 SC lifts ban on sale of diesel cars in Delhi, imposes 1% green cess, Livemint, 13<sup>th</sup> August 2016, available at: <http://www.livemint.com/Industry/yHP6xg0RfW8hT4OxP5tywN/SC-lifts-diesel-car-registration-ban-in-Delhi-NCR-with-rider.html>.

11 James Griffiths, *New Delhi is the most polluted city on Earth right now*, CNN, 8<sup>th</sup> November 2016, available at: <http://edition.cnn.com/2016/11/07/asia/india-new-delhi-smog-pollution/>.

12 Order dated 16<sup>th</sup> December 2016, *M. C. Mehta v. Union of India & Ors.*, Writ Petition (Civil) 13029 of 1985, available at: [http://supremecourtfindia.nic.in/FileServer/2015-12-16\\_1450256085.pdf](http://supremecourtfindia.nic.in/FileServer/2015-12-16_1450256085.pdf).

*continue being registered in Delhi on account of the dependence of the public on such vehicles for supply of essentials. There is, however, no reason why registration of private cars and SUVs using diesel with an engine capacity of 2000 cc and above, should not be banned up to 31st March, 2016. It is noteworthy that diesel vehicles of 2000 cc and above and SUVs are generally used by more affluent sections of our society and because of the higher engine capacity are more prone to cause higher levels of pollution. A ban on registration of such vehicles will not therefore affect the common man or the average citizen in the city of Delhi.”*

As stated earlier, the ban was extended indefinitely and only removed on 12<sup>th</sup> August 2016. The reasoning for such a ban itself cannot be faulted, as it undoubtedly true that such vehicles cause the most pollution and are generally used by the more affluent sections of society. However, it was evident from the very outset that such a move was only a temporary option and what was important was how the Court approached the long term solution to the problem and when the ban was finally removed, the Court imposed a 1% environmental cess on the new registrations of the said vehicles that were banned.<sup>13</sup>

Herein lies the problem that the subsequent move of the environmental cess is not going to be effective in curbing air pollution in Delhi. Especially in comparison to the move in 2001 to switch the public transport system to CNG, which had a long term positive impact on air quality in Delhi<sup>14</sup>, the current move doesn't seem likely to have any deterrent effect on the registration of diesel vehicles in Delhi<sup>15</sup> and is unlikely to incentivise persons to move towards cleaner fuels. Diesel cars above 2000cc are generally highly priced and owned by affluent sections of society, and a cess of 1% will not make a substantial difference in the price of such a vehicle, at least not to serve as a deterrent to the affluent persons buying these cars. Furthermore, the government is of the view that the right to levy a cess is a legislative right and not one that can be exercised by the Court. However regardless of whether that maybe the case, the author is of the view that the Supreme Court has not really succeeded in addressing the long term problem at hand.

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13 *Supra* note 3.

14 *Supra* note 6.

15 *1% environment cess not a deterrent, say activists on SC's diesel vehicle order*, Hindustan Times, 13<sup>th</sup> August 2016, available at: <http://www.hindustantimes.com/delhi/1-environment-cess-not-a-deterrent-say-activists-on-sc-s-diesel-vehicle-order/story-zja101tlezum Zd8Gun8Wsj.html>.

## LOOKING AT LONG TERM ALTERNATIVES

In contrast to the situation in 2001, where the Court ordered the transformation of the public transport system in Delhi, since the Court is here dealing with the control of private vehicles, a vastly different approach is required. Therefore a measure such as a ban was only ever going to work as a temporary measure. The Court and the administration now need to look at feasible long term alternatives to tackle the problem. The role of the environmental regulator in India is filled by the Central Pollution Control Board (CPCB), augmented by the State Pollution Control Board in the various states. However the role of the State Board in the Union Territory of Delhi is performed by the Delhi Pollution Control Committee (DPCC). There is a dire need for the Government of Delhi, to collaborate with the DPCC and the CPCB (wherever measures are required outside the territorial jurisdiction of the CPCB) in implementing these viable long term measures. The author has analysed a few of the possible long term measures that could be applied in Delhi below.

### *Providing Incentives for Hybrid Vehicles*

Another important aspect to look at would be to incentives for the use of hybrid and electric cars in India in general and Delhi in particular. A step in this direction has been taken by the central government in the form of the FAME India (Faster Adoption and Manufacturing of Hybrid and Electric vehicles in India) scheme, which offers incentives for electric and hybrid vehicles of up to Rs 29,000 for bikes and Rs 1.38 lakh for cars.<sup>16</sup> The scheme has already increased the demand for electric and hybrid vehicles, and the National Automotive Board states that 106,524 vehicles are already registered under the scheme, with about 10,647 of those vehicles in Delhi.<sup>17</sup> Though this may not seem like a substantial number, this is bound to increase with several automobile manufacturers such as Maruti Suzuki and Tata Motors planning to release

16 *FAME India: Govt scheme offers up to Rs 1.38 lakh incentives for electric, hybrid vehicles*, First Post, 9<sup>th</sup> April 2015, available at: <http://www.firstpost.com/business/fame-india-govt-scheme-offers-up-to-rs-1-38-lakh-incentives-for-electric-hybrid-vehicles-2189845.html>;  
*FAME India Scheme – Putting e-mobility on road*, Report on Electric Mobility, available at: [autotechreview.com/news/item/download/527.html](http://autotechreview.com/news/item/download/527.html).

17 *FAME India scheme puts demand for hybrid vehicles in top gear*, The Economic Times, 3<sup>rd</sup> May 2016, available at: [http://economictimes.indiatimes.com/articleshow/52090824.cms?utm\\_source=contentofinterest&utm\\_medium=text&utm\\_campaign=cppst](http://economictimes.indiatimes.com/articleshow/52090824.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst);  
*FAME India*, National Automotive Board, available at: <http://www.fame-india.gov.in/dashboard.aspx>.

vehicles in this segment.<sup>18</sup> With the recent release of Volvo's hybrid vehicle, the V40, the manufacturer has urged the government that these incentives need to be increased to see a significant transfer of the consumers to clean fuels.<sup>19</sup>

### ***Conversion or Relocation of Industries***

Another option that is available to the administration is either the conversion or relocation of industries to outside city limits. A similar move was adopted by the Court in the Taj Trapezium Case, where the industries were ordered either to switch to a CNG power source or relocate to outside the prescribed limits in the city.<sup>20</sup> This would be a really important step as several industries are still located in NCT Delhi's residential areas and are having a significant detrimental effect on the air quality in the city.<sup>21</sup> Some measures in this direction have been planned by the authorities, although whether they can be effectively implemented would be crucial to the air quality in Delhi.

The Haryana State Pollution Control Board has planned to categorize industries in Gurgaon into 'Red', 'Orange', 'Green', and 'White' in descending order of adverse impact on the environment, according to criteria developed by the Ministry of Environment, Forests and Climate Change (MoEF). 'White' industries would not require any sort of environmental clearances, whereas the other types of industries would have varying amounts of time to relocate from residential areas to the outskirts.<sup>22</sup> A similar attempt is being made by the Gautama Budh Nagar Administration which directed all industries in Noida and Greater Noida to switch to Piped Natural Gas (PNG) or face closure, but the move has been met with scepticism from most of the industrialists who claim that they cannot afford the high cost of conversion to

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18 *Supra* note 14. [Fame India First Post].

19 *Volvo unveils new models, urges Govt to incentivise hybrid cars*, The New Indian Express, 17<sup>th</sup> December 2016, available at: <http://www.newindianexpress.com/business/2016/dec/17/volvo-unveils-new-models-urges-govt-to-incentivise-hybrid-cars-1549979.html>.

20 *Supra* note 8.

21 *Industries in residential areas derail Delhi's war on pollution*, India Today, 11<sup>th</sup> July 2015, available at: <http://indiatoday.intoday.in/story/poison-capital-delhis-war-on-pollution-yamuna-river-ngt/1/450636.html>.

22 *Gurgaon: Polluting industries to be moved out of housing areas*, Hindustan Times, 22<sup>nd</sup> August 2016, available at: <http://www.hindustantimes.com/gurgaon/gurgaon-polluting-industries-to-be-moved-out-of-housing-areas/story-VdrO6XWSueOxF2VD41COZK.html>.



Natural Gas.<sup>23</sup> However the administration in either case does not seem to have any set plan in incentivising the switch to cleaner fuels for the industries.

A model for such a switch is being put into action by the Telangana government, with polluting industries being made to move to the outskirts of Hyderabad in a phased manner to be completed by December 2017, with also a possibility of placing industries engaged in similar activities in clusters, so as to more effectively implement pollution control methods. The Administration also plans to incentivise the move for the industrialists by offering tax rebates, easy land conversion and even residential quarters near the clusters for the employees.<sup>24</sup> If the Administrations in NCR too need to take similar measures to incentivise the move for the industries, barring which the effective implementation of such a policy is highly unlikely.

### ***Leapfrogging Emission Standards***

Another important measure that had been suggested by the Centre for Science and Environment's (CSE) Delhi Clean Air Action Plan<sup>25</sup> in 2014 was to fast track the switch from Bharat Stage IV to Bharat Stage VI emission standards as soon as possible. At the time the Union Ministry of Petroleum and Natural Gas' Committee on Auto Fuel Policy had given their roadmap for transition of emission standards as –

- Bharat Stage IV (countrywide) in 2017;
- Bharat Stage V (countrywide) in 2020;
- Bharat Stage VI (countrywide) in 2024

In 2014, CSE had stated that to cope with the rising number of vehicles and pollution levels in the country, India needs to adopt a more fast track transition in line with the timeline being followed in Europe, which would entail –

23 *Pollution alert: Noida industries told to switch to natural gas*, Hindustan Times, 5<sup>th</sup> January 2016, available at: <http://www.hindustantimes.com/noida/noida-industries-asked-to-switch-to-natural-gas-by-march-31-or-face-action/story-qIMYg7ZvgJWld8JpjDrigL.html>.

24 *1,068 polluting industries to be shifted to outskirts by December 2017*, The Times of India, 17<sup>th</sup> July 2016, available at: <http://timesofindia.indiatimes.com/city/hyderabad/1068-polluting-industries-to-be-shifted-to-outskirts-by-December-2017/articleshow/53246799.cms>.

25 *Delhi Clean Air Action Plan*, Centre for Science and Environment, 2014, available at: <http://www.cseindia.org/userfiles/DelhiCleanAirActionPlan.pdf>.

- Bharat Stage IV (countrywide) by 2015;
- Bharat Stage V (countrywide) by 2017;
- Bharat Stage VI (countrywide) by 2020;

However given the alarming state of air quality in India's cities, especially NCR Delhi, the Central Government has signalled its intent to leapfrog BS - V entirely and switch directly to BS - VI norms by 2020.<sup>26</sup> This seems like a measure that is desperately needed in Indian cities, the reaction from automobile manufacturers has been mixed, with some manufacturers such as Toyota-Kirloskar and Mercedes-Benz welcoming the move<sup>27</sup>, whereas others have expressed scepticism over the ability of the industry to skip BS - V entirely in such a short period of time, given the complexity of the process and the huge amounts of investment required.<sup>28</sup> Even the Petroleum industry has expressed its reluctance, due to the huge amounts of investment required in such a short period.<sup>29</sup> Therefore though the move is a bold one, and possibly a very necessary one, the Central Government may be required to subsidise the move for the stakeholders involved so that the transition will not be overly burdensome on the consumer and the automobile industry.

### ***Limiting Car Registrations & Controlling Dieselization***

A few years ago, the city of Beijing had an infamous reputation across the world for extremely high levels of air pollution, and the city administration quickly took notice and implemented a slew of measures to curb the problem. They first implemented a road space rationing system where cars are limited only one day every week, during which commuters rely on either car-pools or take the subway. Under these limits, which rotates numbers every 13 weeks, tail plate numbers ending 4 and 9 are banned

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26 *India To Skip Bharat Stage-V, Stricter Car Emission Norms Advanced To 2020*, NDTV, 7<sup>th</sup> January 2016, available at: <http://www.ndtv.com/india-news/india-to-skip-bharat-stage-v-stricter-car-emission-norms-advanced-to-2020-1262957>;

*India Bharat Stage VI Emission Standards*, International Council on Clean Transportation, April 2016, available at: <http://www.theicct.org/sites/default/files/publications/India%20BS%20VI%20Policy%20Update%20vF.pdf>.

27 *Ibid.*

28 *BS III, BS IV.. BS VI? Here's why India's auto emission norms are, well, BS*, First Post Business, 2nd June 2015, available at: <http://www.firstpost.com/business/bs-iii-bs-iv-bs-vi-heres-why-indias-auto-emission-norms-are-well-bs-2274398.html>.

29 *Ibid.*

on Mondays, 5 and 0 on Tuesdays, 1 and 6 on Wednesdays, 2 and 7 on Thursdays, and 3 and 8 on Fridays, with no limits on the weekend.<sup>30</sup> Earlier in the year, Delhi experimented with an alternate day, odd-even license plate rotation rule<sup>31</sup> as an emergency measure, but such a move was never meant to be a permanent solution.<sup>32</sup> The city of Paris too implemented a similar rule as an emergency measure, along with making public transport free to encourage citizens to use it.<sup>33</sup>

Then a limit on the total number of car registrations each year was placed. When the rule was initiated in 2011, the limit for the year was 240,000.<sup>34</sup> The registrations are handed out to the members based on an online lottery held each month. In 2016, the limit was cut down to 90,000 and in the month of June 2016, out of 2.7 million applicants, only about 3720 registrations were handed out, a ratio of around 1/725.<sup>35</sup> In stark contrast, Delhi registered 5,74,602 vehicles in 2014, which amounts to about 1,600 each day<sup>36</sup>, and barring the dip in sales due to the diesel ban discussed in this article, the number of registrations are only on the rise.

Perhaps, most importantly, Beijing also put in place a sophisticated system of enforcement that does not rely on the traffic police. A network of surveillance cameras monitor traffic and flags violators, who are immediately, sent a 200 Yuan fine to their registered accounts with the Beijing Traffic Management Bureau. Moreover, if a

30 Ananth Krishnan, *Car limits: Why Delhi is no Beijing*, Daily-O, 5<sup>th</sup> December 2015, available at: <http://www.dailyo.in/politics/delhi-pollution-arvind-kejriwal-aap-odd-even-formula-beijing-car-ban-china/story/1/7778.html>.

31 *Delhi's odd-even scheme prevented increase in pollution: CSE*, Live Mint, 6<sup>th</sup> May 2016, available at: <http://www.livemint.com/Politics/Delhis-oddeven-scheme-prevented-increase-in-pollution-CSE.html>.

32 *Odd-even can't be implemented permanently, clarifies Kejriwal*, The Hindustan Times, 1<sup>st</sup> Jan 2016, available at: <http://www.hindustantimes.com/delhi/live-new-year-off-to-odd-start-as-delhi-tries-out-its-odd-even-rule/story-N.html>.

33 *Paris curbs car use as air pollution chokes city*, CNN, 8<sup>th</sup> December 2016, available at: <http://edition.cnn.com/2016/12/08/europe/paris-air-pollution-free-metro-rides/>

34 *Beijing launches 'car lottery' to help ease gridlock*, The Telegraph, 3<sup>rd</sup> Jan 2011, available at: <http://www.telegraph.co.uk/news/worldnews/asia/china/8236891/Beijing-launches-car-lottery-to-help-ease-gridlock.html>.

35 *Want to Drive in Beijing? Good Luck in the License Plate Lottery*, The New York Times, 28<sup>th</sup> July 2016, available at: [http://www.nytimes.com/2016/07/29/world/asia/china-beijing-traffic-pollution.html?\\_r=0](http://www.nytimes.com/2016/07/29/world/asia/china-beijing-traffic-pollution.html?_r=0).

36 *Year wise Vehicle Registered in Delhi*, Delhi Traffic Police, available at: <https://delhitrafficpolice.nic.in/about-us/statistics/>.

camera spots a violator even several times on the same day, a fine is applied for every sighting. After a certain number of violations, drivers will have their licence suspended and will have to retake a driving test after a six-month period. The system is entirely automated; minimising room for either corruption or evasion, and the fines are high enough to ensure the rules are followed.<sup>37</sup> Similar measure limiting the number of car registrations with an effective enforcement system are desperately needed in NCR Delhi and several other congested cities in India and the Administration needs to muster the courage to take a much needed, but what will sure be unpopular, move to ensure long term air quality in India's cities.

Another important aspect that needs to be looked at by the Administration is that if the increasing dieselization of vehicles in India. It is ominous that at the current rate, India will soon overtake Germany as the world leader in diesel car sales.<sup>38</sup> After reaching a peak of 58% of the share of total vehicles in 2012-13, diesel vehicles stood at 48% of all vehicles in 2014-15, and dropped 44% in 2015-16 following the abovementioned ban on 2000cc diesel vehicles.<sup>39</sup> However following the lifting of the ban in August, 2016 and the negligible deterrent effect of the current environmental cess<sup>40</sup>, the percentage of diesel vehicles is likely to rise sharply again. Activists are of the view that the important thing that needs to be addressed is the large disparity between the prices of petrol and diesel, and that this needs to be addressed.<sup>41</sup> At the peak in diesel sales in 2012-13, the gap between petrol and diesel prices stood at <sup>1</sup> 30. It currently (December, 2016) stands at <sup>1</sup> 12.37. The amicus curiae on the diesel bancase, Mr Harish Salve is of the view that the cess on diesel cars needs to be in the range of 20-30% to compensate for the difference in fuel taxes between petrol and diesel.<sup>42</sup>

The government needs to either pursue such a move or reduce subsidies on diesel to remove the disparity in price between the two fuels, to incentivise the consumer into using the cleaner fuel.

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37 *Supra* note 30.

38 *India to top world in diesel car sales*, The Hindustan Times, 24<sup>th</sup> June 2015, available at: <http://www.hindustantimes.com/business/india-to-top-world-in-diesel-car-sales/story-html>.

39 *Supra* note 3.

40 *Supra* note 10.

41 *Ibid.*

42 *Ibid.*

### ***Improve Public Transport and Last Mile Connectivity***

There is a dire need for the scaling up of public transport in India, and improving last mile connectivity. In the Order<sup>43</sup> dated 28<sup>th</sup> July, 1998, the Supreme Court as mentioned earlier, directed the Delhi Administration to augment the total number of buses to 10,000. The High Court on Delhi too reminded the DTC of this directive and stated that given the increase in population, 12,000 buses would be required in Delhi.<sup>44</sup> This directive still hasn't been complied with by the DTC, with reports suggesting that they are nowhere near the mark.<sup>45</sup> When Beijing put in place its road space rationing system and limited the number of car registrations, the administration made huge investments into rapidly scaling up its public transport system, which transferred a large number of commuters onto public transport and eased congestion on the roads. The total length of Beijing's metro is now nearing 600km, nearly that of the Delhi Metro.<sup>46</sup> Though studies have shown that the Delhi Metro has indeed played a substantial role in reducing pollution in Delhi<sup>47</sup>, connectivity definitely needs to improve at the rate Beijing's metro grew to incentivise commuters to switch to the Metro. Diversion of DTC bus routes to supplement the Metro and improving the Metro Feeder Bus Service will be crucial to increasing the efficiency, decreasing commute times and by extension, increasing the number of commuters using this service.<sup>48</sup>

### ***Controlling Widespread Crop Burning***

Another vastly reducible source of air pollution is crop burning that is practised in fields in the states of Punjab, Haryana and Uttar Pradesh, which is done to ready the fields to plant the winter wheat crop. The National Green Tribunal has already

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43 *Supra* note 3.

44 Court on its Own Motion v. State of NCT of Delhi &Ors., 2011 SCC Online Del 1108.

45 Press Trust of India, *DTC phased out nearly 900 buses but added none in over 2 years*, Business Standard, 30<sup>th</sup> September 2014, available at: [http://www.business-standard.com/article/pti-stories/dtc-phased-out-nearly-900-buses-but-added-none-in-over-2-years-\\_1.html](http://www.business-standard.com/article/pti-stories/dtc-phased-out-nearly-900-buses-but-added-none-in-over-2-years-_1.html).

46. *Supra* note 30.

47 Deepti Goel & Sonam Gupta, *Delhi Metro And Air Pollution*, Working Paper No. 229, April 2015, Centre for Development Economics, Delhi School of Economics.

48 Mukti Advani and Geetam Tiwari, *Evaluation Of Public Transport Systems: Case Study Of Delhi Metro*, Proceeding in START-2005 Conference, IIT Kharagpur.

addressed this issue and ordered the states to impose fines on farmers for each incidence of crop burning.<sup>49</sup>

It also directed the States to provide the machinery for crop removal for free to small scale farmers and at subsidised rates for larger farmers to incentivise farmers against crop burning. However NASA satellite images a year after this directive showed no abatement in smoke generated due to crop burning.<sup>50</sup> Therefore steps in the right direction have been taken towards controlling widespread crop burning, however better enforcement on the part of the State Governments would be required to effectively reduce it.

## CONCLUSION

The primary difference between the recent measures directed by the Supreme Court to curb the alarming levels of air pollution in Delhi as opposed to the first wave of judicial activism that was exercised in this regard by it in the 1990s, is that the measures taken back then were all long terms measures meant to have a lasting impact on the air quality in Delhi, and indeed they did. Currently however the measures that have been taken such as the ban on diesel vehicles discussed in this paper and other measures such as the ban on construction can only be used as interim or emergency measures for period of severe pollution, such as the ones seen in the preceding two winters. However what Delhi needs desperately at the moment is a series of long term measures of the nature of the ones taken in the late 1990s, that seek to address the root of the problem, rather than mere temporary band-aid measures. Therefore what Delhi needs desperately at the moment is a combination of the long term measures that have been suggested above and the short term emergency measures that are being employed by the current administration to be utilised in periods where there is a severe drop in air quality in the capital. But what can't be stressed enough is that merely just the measures that are currently in place are definitely not sufficient to

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49 *Take action against farmers for crop residue burning: NGT*, The Hindu, 10<sup>th</sup> December 2015, available at: <http://www.thehindu.com/news/national/take-action-against-farmers-for-crop-residue-burning-ngt/article7971366.ece>.

50 Geeta Anand, *Farmers' Unchecked Crop Burning Fuels India's Air Pollution*, The New York Times, 2<sup>nd</sup> November 2016, available at: <http://www.nytimes.com/2016/11/03/world/asia/farmers-unchecked-crop-burning-fuels-indias-air-pollution.html?>

tackle the environmental crisis that the capital is in at the moment, and the administration needs to learn from the action taken by Beijing and implement stern far seeing measures immediately, when there is still a slight chance of an otherwise unlikely recovery.

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