



ENVIRONMENTAL IMPACT OF ROAD TRAFFIC - ISSUES AND SUGGESTIONS

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ABSTRACT :

The vehicular traffic is gradually increasing every year all over the country. People have a passion for driving the vehicles on the one hand and the road traffic is increasing due to the growth of business. The environment we live in is being affected due to continuous



pollution due to the smoke from vehicles. This is greatly affecting the health of plants, trees, people, animals and so on. The governments efforts are proving to be successful only to some extent in overcoming the increasing pollution because in the developing countries like India majority of the people lack proper

knowledge of maintaining the vehicles and due to lack of appropriate driving skills. This process is causing huge road pollution that severely affects the environment and should be overcome through adequate policy formulation and the need to generate awareness among the people to practice proper methods to control the pollution. This article focuses on the environmental impact of vehicular traffic with special reference to India.

KEYWORDS : Road Traffic, Green Planet, Environmental Degradation, Driving skills, Pollution, Developing Countries.

INTRODUCTION

The vehicles are a part and parcel of our everyday lives. The geographical distance to the residing and point of distribution of goods and people has largely widened to that extent that people find it hard to daily activities. This process is boosting our economy and providing the people their required services. The increase in their usage by the population is leading to increase in the air pollution there by increasing global temperatures. It is affecting the health of the people because it is causing the cardiovascular and respiratory diseases and the number of early deaths is gradually increasing especially in the urban areas.

OBJECTIVES

The objectives of the study are mentioned below:

1. To discuss about the increasing trend of vehicular traffic
2. To understand the environmental pollution due to road traffic
3. To identify the reasons for environmental pollution due to road traffic
4. To suggest measures to overcome the road traffic pollution

ENVIRONMENTAL POLLUTION DUE TO ROAD TRAFFIC


The major pollutants that are emitted by the vehicles movement through roads in are particulate matter

(PM), nitrogen dioxide, sulphur dioxide, carbon monoxide, benzene or lead, hydrocarbons and so on. The air quality in the capital cities of our country is unable to meet the world Health Organization guidelines due to unscientific road traffic planning and unnecessary plying around in vehicles. The rate of air borne particulate matter is a major concern for the population inhaling it and several countries are often shutting down their schools and colleges due to heavy air pollution and heavy load of transportation and traffic jams in towns and cities mainly due to lack of proper planning and negligence of law implementing agencies. The safe limit of air borne particulate matter mentioned in the World Health Organization is twenty five micrograms in diameter but in India at many busy regions the Particulate Matter of ten and two and a half in diameter which is dangerous to the health of the people and climate change.

EFFORTS OF GOVERNMENT IN TACKLING ENVIRONMENTAL POLLUTION

The Government of India is making every possible effort to tackle the issue of air pollution through road traffic. The government is encouraging the electric vehicle makers so that it could introduce eco-friendly two wheelers, cars, buses and so on. The State Governments have also introduced similar measures and trying to cut down the pollution effectively throughout India. India is implementing the Bharat Stage V norms to encourage the fight against air pollution and increase the Green Initiative programme speedily. This is good measure but the vehicle makers and refiners find it difficult to invest additionally.

POLLUTION CHECK
 The move to upgrade to BS VI standard can significantly help the fight against pollution. But the task is uphill



63 No. of Indian cities that comply with the BS IV norm

₹37,000 Average cost of upgrading each BS IV vehicle to BS VI

Emission load

Petrol cars (g./km)			
	NOx	PM	
BS IV	0.08	NA	
BS VI	0.06	0.0045	

Diesel cars (g./km)			
	NOx	PM	
BS IV	0.25	0.025	
BS VI	0.08	0.0045	

BS norms were introduced in 2000 and were modified around European regulations; BS IV is equivalent to Euro IV

For fuels, it stipulates characteristics such as sulphur – a major pollutant – content, density of fuel etc.

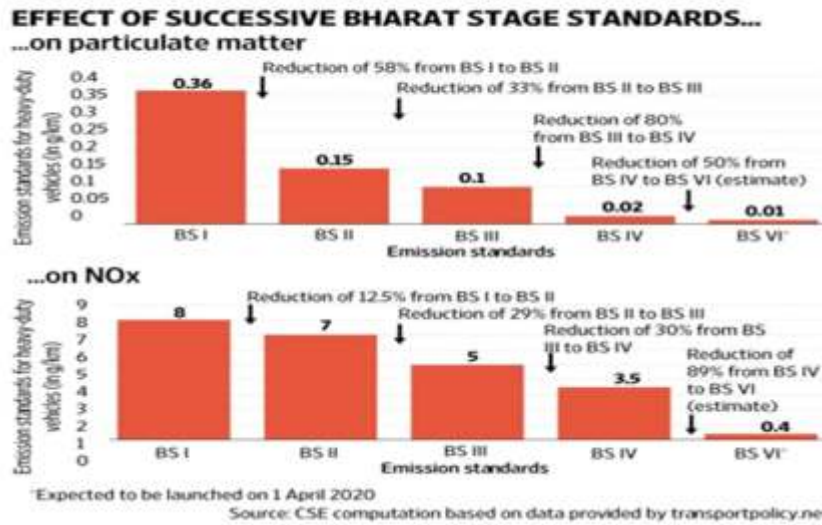
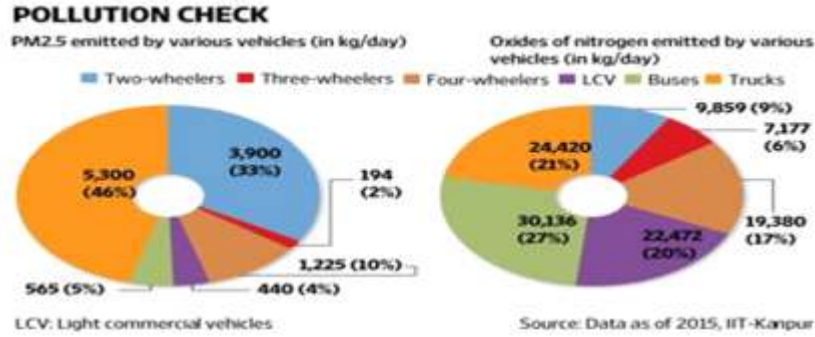
India lags Europe. Euro VI came in Sept 2014. BS VI will now come in 2020

PM: PARTICULATE MATTER (OF ALL SIZES)
 NOx: MIXTURE OF NITROGEN, MAJOR CAUSES OF RESPIRATORY DISEASE

Vehicular emission norms in India

- **1991** – Idle CO Limits for Petrol Vehicles and Free Acceleration Smoke for Diesel Vehicles, Mass Emission Norms for Petrol Vehicles.
- **1992** – Mass Emission Norms for Diesel Vehicles
- **1996** – Revision of Mass Emission Norms for Petrol and Diesel Vehicles, mandatory fitment of Catalytic Converter for Cars in Metros on Unleaded Petrol.
- **1998** – Cold Start Norms Introduced
- **2000** – India 2000 (Equivalent to Euro I) Norms, Modified IDC (Indian Driving Cycle), Bharat Stage II Norms for Delhi.
- **2001** – Bharat Stage II (Equivalent to Euro II) Norms for All Metros, Emission Norms for CNG & LPG Vehicles.
- **2003** – Bharat Stage II (Equivalent to Euro II) Norms for 13 major cities
- **2005** – From 1 April Bharat Stage III (Equivalent to Euro III) Norms for 13 major cities
- **2010** – Bharat Stage III Emission Norms for 2-wheelers, 3-wheelers and 4-wheelers for entire country whereas **Bharat Stage – IV** (Equivalent to Euro IV) for 13 major cities for only 4-wheelers. **Bharat Stage IV** also has norms on OBD (similar to Euro III but diluted)
- **2017** – Bharat Stage IV Emission Norms finalized (as per Supreme Court order)
- **2020** – Proposed date for country to adopt Bharat Stage VI norms for cars, skipping Bharat Stage V

Source: <http://www.bodhibooster.com/2017/04/Bharat-Stage-norms-BS-EU-pollution-2017-2020.html>



Source: CSE computation based on data provided by transportpolicy.net

ATTITUDE OF THE TRAVELLING PEOPLE THROUGH VEHICLES

In India the people travelling through vehicles majorly through private vehicles usually neglect lot of traffic rules and infact many knew very few rules of traffic and their signal system. Approximately 97 per cent of them are not aware of the exact fines of traffic violation due to accidents and so on. They neglect the maintenance of their vehicles due to lack of knowledge and negligence or to save their money. Majority of them take rides just to show-off that they are rich enough.

ISSUES RELATED TO POLLUTION DUE TO ROAD TRAFFIC

1. Slow movement of vehicles
2. Low fuel quality
3. Mixture of kerosene and other low cost oils to petrol and diesel
4. Two stroke engines
5. Old vehicles
6. No frequent servicing of the vehicles and oil change
7. Traffic congestion in busy areas
8. People violate the road crossing rules every minute creating traffic jams
9. Low maintenance of traffic rules by the traffic police
10. Parking rule violation by the vehicle owners and drivers
11. Huge corruption by the traffic police as stated by offenders
12. Road side parking
13. Negligence of traffic rules

14. Damaging road for pipeline connections and cables and not repairing it
15. Lack of adequate metro rail connections throughout India from urban to even to small rural areas
16. Lack of adequate flyovers at busy points
17. Lack of adequate public transportation vehicles and towards the interiors of streets
18. Minors learning to ride the vehicles often end in disrupting the traffic instead of practicing in the ground
19. Lack of advanced engineering ideas to control vehicular traffic
20. Underground and multi-layer flyovers are not in the agenda of the governments
21. Ninety seven percent low maintenance of vehicles
22. The fines on the road traffic violators is low
23. CCTV monitoring throughout the roads is not being implemented
24. Awareness camps are not organised to control, regulate and reduce the unnecessary usage of vehicles

SUGGESTIONS

People carrying capacity of the vehicles should be increased in India.

Door –to–door connectivity of transporting people through government run vehicles is not implemented in India.

Public transportation with in major cities and towns is inadequate throughout the country.

Cleaner fuel and vehicle technologies need to be improved.

Older vehicles should not be allowed to ply on the roads.

High investment in the field of technology that will reduce the air pollution

Quality of the fuel should be maintained and tested frequently

Two stroke engine vehicles should be banned.

Old vehicles should be allowed with new engines as per new standards.

Traffic should be diverted in different available paths/roads to avoid traffic congestion in busy areas.

Imposing and collecting heavy taxes and fines for violating the traffic rules.

Individuals crossing roads should be fined for violating rules thereby creating traffic jams.

Traffic signals should be installed at small places and busy areas to avoid deaths and traffic jams.

Parking violators should be punished strictly and their vehicles should be confiscated for a fixed period.

Transparency of the traffic police functioning on roads should be monitored by video recording their activities at the point of their duty to avoid corruption.

Awareness about the traffic rules should be advertised frequently from the grassroot level to the urban level.

Public transportation with mini vehicles that could transport goods and services to every household should be introduced.

Parents of minors should be fined and punished for the violation of traffic rules by their children.

The traffic management system implemented in advanced cities in other countries should be implemented in India.

Underground and multi-layer flyovers should be the agenda of the governments

The fines on the road traffic violators should be increased depending on the income of their family.

E-vehicles with advanced technology should be brought into practice from grassroot level.

Alternative fuel and the required technology should be brought into usage to tackle the issue.

Confiscation of the vehicles by the government agencies that is polluting air above the standards mentioned through regular checking points and issuing certificate towards it by setting time limits for next check up.

CCTV monitoring throughout the roads should be implemented.

Petrol and Diesel shops should be inspected every day so that they do not use foul methods to earn profits by mixing water and other low quality oils to the customers.

New policies should be made to tackle this menace effectively by the government agencies.

Awareness camps should be organised to control, regulate and reduce the unnecessary usage of vehicles.

Education about air pollution through vehicles and global warming should be provided through the camps by the traffic police in schools, colleges and on weekends at a particular place regularly so as to generate

awareness among the public using vehicles frequently from grassroots level to the urban metros in India.

CONCLUSION

The trend of owning private vehicles and using them for their convenience has been increasing gradually. The economy is growing and along with that the living standards of the people caught momentum thereby the purchasing power of vehicles run by petrol and diesel. This is a great achievement of mankind but on the other hand it is increasing air pollution to such extent that it is causing respiratory and other diseases especially in the urban areas. Different types of chemicals are present in the smoke let out by the vehicles we use that are very harmful for the people, animals, plants and environment as a whole. Several areas are witnessing acid rains due to over air pollution by vehicles on roads leading to the pollution of soil and water bodies with further effects on the aquatic life and it is also affecting the food chain to a large extent. The automobile industries should take this issue as a serious concern and develop new and advanced technology to tackle this issue effectively. All the stakeholders should voluntarily take part in the fight against this menace by creating awareness among the people and thereby safeguarding the environment we live in for a better life tomorrow on this planet earth.

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