

Research Paper—Geography



Feb, 2010

Pollution on Wheels



***Dr. Jyoti Singh**

***Reader, Dept. of Geography, J.V. Jain College, Saharanpur**

One sector which is running amock in terms of growth of emissions is transport. The maximum increase in emissions (28%) of rich countries between 1990 and 2007 is in this sector. In 2009, transport contributed 16% of the world's greenhouse gas emissions and 60% of oil consumption. There is an estimated 900 million automobiles in the world (excluding two-wheelers) and by 2030 this figure is estimated to cross 2.1 billion.

Automobiles are the main carriers of noise and air pollution running through the nerves of cities. Regarding Saharanpur the total number of vehicles have risen from 19,387 in 2002 to 22,732 by 2009. The immense boost in number of vehicles (table 1) creating tremendous pressure on city roads and health hazards to city dwellers. As a result of high density of traffic at Nehru Market, Dehradun Road and Clock tower, have emerged as most polluted parts of the city and has developed into hot-spots of the city where the temperature is 1°C higher due to traffic pollution from the entire city. However the government has implemented its policies to cut vehicular pollution but unless we acknowledge pollution dilemmas, it can adversely affect the climate of the world. Vehicles are the main source of Air & Noise Pollution. More than 75% of the Pollution is created by the vehicles. Number of vehicles is increasing day by day and has become a great matter of concern for Air, Noise Pollution and degradation of environment. The number of

vehicles on Indian roads 23 million from the year 1986 to 2001 giving rise both to air and noise Pollution.

Saharanpur City :

Saharanpur is an important city of western U.P. The population of the city was 4.69 Lakhs in 2001 and covered an area of 3201 hectares. It is situated on 29°50' 'N' latitude and 77°32' E' longitude. Its height from mean sea level is 270.8M. Climate is very suitable. It is served by two rivers Dhamola and Paon Dhoi which passes through the middle of the city and is having mild slope of 1° from North to South. The important roads connect the city to Behat and Chakrota in North, Dehradun in North East, Delhi to its South, Gangohi in South West, Haridwar in East, Muzaffarnagar in South East, Ambala in West and, Chilkana in North West.

Methodology

The entire work is based on data collected from the A.R.T.O. and Central Pollution Control Board also survey held on main roads recording the traffic flow at peak from 9 to 11 a.m. and 5 to 7 p.m. The socio economic infrastructure of the city depends upon its smooth transport system in Saharanpur is well connected to important towns in all directions to three states. Maximum flow of heavy vehicles is recorded on Dehradun road followed by Ambala Road whereas the maximum flow of light vehicles is on Delhi road followed by Dehradun road. Hence Delhi road is the busiest road followed by Dehradun road. There is high density of traffic

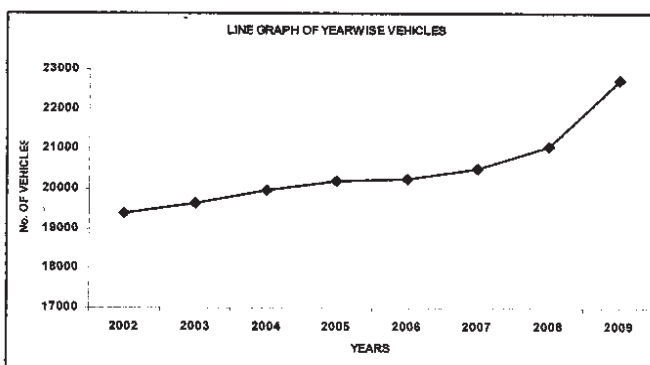
in city specially at the Clock Tower and Delhi road. Due to heavy out going traffic during peak hours of day. From the centre of the city along with local traffic and jams of traffic witnessed very often. Comparatively less traffic is recorded on outgoing roatis such as Delhi road, Dehradun road, Ambala road as compared to others. As a result of heavy vehicular Pollution three hot spots have been discovered in the city where the temperature is above average due to heavy Vehicular Pollution. 1. Clock Tower Area, 2. Civil Court Junction, 3. Dehradun Road Crossing The traffic is very high at Clock Tower due to dual burden of local and out going traffic. It is also the nodal point connecting the cities to different directions. Due to pollution the temperature rises 3 D - 3.5° C above normal. At about same time there is rise of 1 DC at Dehradun road and 2°C at civil court are due to high density and speed of vehicles. Clock Tower is most polluted followed by civil court and Dehradun cross road area.

**Increasing Pressure of Vehicles
(Saharanpur City)**

Table-1

Years	2002	2003	2004	2005	2006	2007	2008	2009
Nos. of Vehicles	19387	19635	19967	20195	20264	20514	21070	22723

Increasing number of vehicles



Findings: Pollution by vehicles has an ill effect on human health Some of the ill effects are irritation of respiratory track, eyes, nose, throat etc. Asthama, it also causes hypertension, drowsiness etc. The people living in areas where the pollution is heavy are prone to above diseases.

A traffic volume survey gives the report of flow of traffic on six major work

Table-2

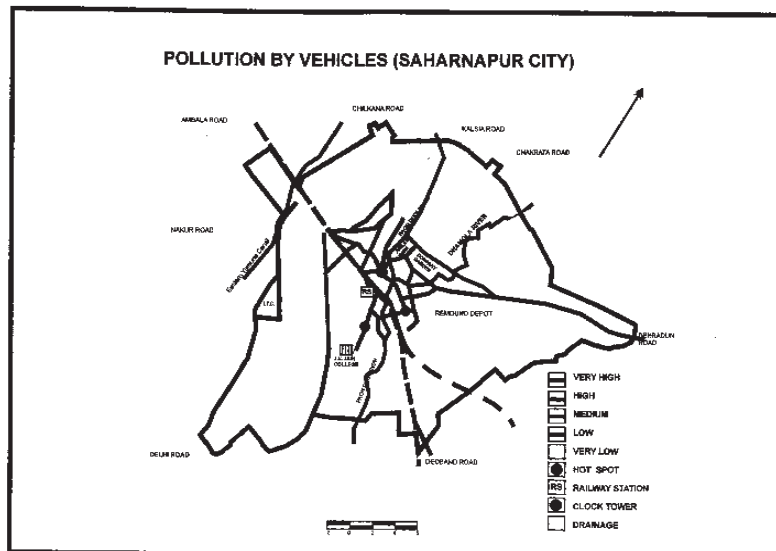
Roads	Volume of traffic on important city roads							
	B/T	Cars	Heavy Vehicles	Two Wheelers	Auto	Light Vehicles	Cycle	Others
Dehradun	2012	3186	5189	4161	219	4380	3909	14
Deboand	75	831	906	1689	75	1865	1983	2
Delhi	651	3480	4131	5601	185	5786	5320	6
Chakrota	609	2132	2741	5275	372	5647	8460	19
Chilkana	270	894	1164	1775	265	3319	3319	2
Ambala	1462	2175	3637	2267	0	1827	1827	36
Total	5079	12689	17768	20768	1217	25085	25028	77

There is high density of traffic in city specially at the Clock Tower and Delhi road.

In Saharanpur people living near Clock Tower, Jubli Park, Station road are most effected by Vehicular Pollution.

Problems:

1. Problems like shortage of parking places, commercial activities in the most density populated area of the city, poor conditions of vehicles encroachment of roads, narrow roads, poor condition of road density of traffic create hurdles in easy How of traffi c. 2. There is no outer road linking Delhi road to Ambala road and Dehradun road from



outer periphery of the city. Therefore city roads have to bear the burden of its local traffic and passing of heavy traffic moving cities with no concern to Saharanpur. 3. There is no provision for trucks to stand in the city. The truck stand on roads for loading and unloading goods. 4. Presence of railway station, bus stand and taxi stand at one point make the roads congested.

Remedies for Traffic Planning and Management:

1. To relieve congestion on roads, there is a need for constructing fast motor ways, to enable transit traffic to pass unhindered. The existing road capacity network can be better utilized by up gradation of traffic management 3. Heavy duty vehicles should not be allowed to move on the inner city roads especially during peak hours (8-12 noon and 4-8 Pm) to reduce traffic stagnation. 4. Encourage the introduction of modern technology in vehicles. In long run the use of

electric vehicles or battery operated vehicles will be needed.

Legal Aspects

Followings acts have been laid down to safeguard our environment from air and noise pollution.

1. Air (Prevention and control of Pollution) Act 1981.
2. Environment Protection Act 1982.
3. Noise Prevention Act.

Conclusion

The automobiles is man's greatest achievement. It has made life easy and comfortable. We have to live with it inspite pollution effect. These effects can be reduced to great extent by use of better kind of fuel. Improved engine design of vehicles, good roads, better maintenance of vehicles, use of CNG and LPG and above all the awareness. The day is not far when battery operated; electric vehicles or hydrogen driven vehicles will be on road with minimum pollution effect or environment and man.

REFERENCE

1. Environment Management: G. N. Pandey
2. Environment Geography : Savinder Singh
3. Environment Pollution : G.K. Singh
4. Environment Awareness : R C. Chandana
5. Environment Geography : H.M. Sexana
6. RI. A.RT.a. Saharanpur : Rajesh Srivastava