



## Pollution in an industrial town Mandi Govindgarh

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### Abstract

Sustainable planned industrial growth is necessary for future. Various types of pollution such as air, water, soil etc. are produced by unplanned industrial development. Development without concerning about environment problem is very harmful for human. There is a need to tackle the situation in the early phase of problem. Once the problem is larger than it requires much more effort to handle the situation. Same problem faced in the Mandi Govindgarh, present paper discussed about such problem. The average PM10 particle is 161.20 micros/m<sup>3</sup> which is very much higher than permitted level of PM10, as per the NAASQ above than 50micros/m<sup>3</sup> is unsafe level. PM10 is particular matter < or = 10 micros aerodynamic diameter. Due to this very high level of pollution, there is a higher frequency of symptoms of angina and cardiovascular disease. Female population is more effective in comparison to male because they are more vulnerable to disease. In 2011, there were 4351 heart cases which are much higher than any other normal town.

**Keywords:** pollution, sustainable, development, planning

### Introduction

Today India have most polluted cities in the world, this is the reason of bad management. Industrial town in India are faces the problem of pollution due improper planning and negligence in starting periods. Now the problem is so much high that it requires very much effort to control the situation. Pollution is increasing day to day due to disrupt of human-environment relations. Human utilize the environment sources to fulfill their greedy needs without concerning about the future problems. Hap hazard growth in industries is the main reason behind the polluting the environment. This is very harmful for our future generations. Diseases are increasing in large no., after 1-2 month we heard about the new disease, this is all due to pollution. Numbers of ill people are increasing day to day by one disease or more diseases. Abnormal environment action such as change in time of rain, amount of rain, heat etc. all are the result of wrong human environment relations. This also face in the Mandi Govindgarh which is known as the steel company. This whole research work done on the mandi Govindgarh.

### Study area

Industrial development without proper planning created a catastrophe situation like in case of Mandi Govindgarh which is popularly known as "Steel city of Punjab" or "Loha Mandi". Town is situated on national highway which provides it to good transport services. It is situated between 30.66N to 30.83N latitude and 76.31 E to 76.58 E longitudes. Although its latitudinal location make it in temperate zone but climatic condition of this area are more or less meet with tropical climate with definite monsoonal season, due to Himalayan presence.

Mandi Govindgarh is mainly famous for steel and iron industry. It has 8 industrial cluster related to iron and steel

industry, milk plant, pickling industry, various furnaces, lead extraction unit. There is no distinction of industrial, commercial or residential areas in Mandi Govindgarh. It includes 247 steel rolling mills, 13 refractory, 38 cupola furnaces, 89 induction furnaces, 1 arc furnace and forging industry each and 3 lead extraction units. In 2011, its position is 17th most polluted industrial town in India.

### Water Pollution

According to the Central pollution control board report, water pollution index is at 55.50 which are very high and fall into the category of severely polluted. The reason behind this is non-installation of sewage treatment facilities and improper disposal of wastewater into the drains. Due to this underground water is also polluted very badly which causes a lot of diseases. Milk plant, pickling units, and galvanizing unit are the main sources of water pollution. Water is polluted by motor oil, antifreeze, hydraulic and windshield wiper fluids, air conditioning refrigerator etc. Untreated solid and liquid waste from these industries polluted the water. Sewerage system remains choked most of the time resulting stagnation of wastewater in nearby vacant areas. This openly contaminated wastewater is the birth place of various bacterial, viral and parasitic diseases.

Soil pollution Bio waste, domestic refuses, untreated water, chemical, molted and grinded metal are the main sources in soil pollution. Dumping of untreated solid and liquid waste from industries and domestic waste in unplanned way also constitute main portion in soil pollution. Stubble burning in the fields kills the helpful bacteria which is very helpful in soil fertilization. Excessive use of fertilizer and pesticides in rural area encourage the soil pollution.

Air pollution is major problem in industrial area. Polyaromatic hydrocarbon, carbon di-oxide, carbon monoxide, oxide of

oxygen, nitrogen oxide and sulphur oxide constitute main pollution in industrial area. Co<sub>2</sub>, Nox from stubble burning in the fields, tractors etc constitute pollution in rural area. Town is in the list of 43 highly polluted areas in the country identified by ministry of environment and forest on the basis of report on available data of air, water pollution and location of hazard industries. The main sources of air pollution are arc furnaces, induction furnaces, steel furnaces, refractory forging industry, lead extraction unit.

### **Pollution level in Mandi Govindgarh**

The average PM<sub>10</sub> particle is 161.20 micros/m<sup>3</sup> which is very much higher than permitted level of PM<sub>10</sub>, as per the NAASQ above than 50micros/m<sup>3</sup> is unsafe level. PM<sub>10</sub> is particular matter < or = 10 micros aerodynamic diameter. Due to this very high level of pollution, there is a higher frequency of symptoms of angina and cardiovascular disease. Female population is more effective in comparison to male because they are more vulnerable to disease. In 2011, there were 4351 heart cases which are much higher than any other normal town. Traffic congestion and large scale construction is another big problem in the area. Temperature remains high in this area. Due to this, the emission of hydro carbon and carbon monoxide is very high which creates problem in breathing. Ashes on the clothes and surrounding are very common in this area. One person among ten persons is sick by one or more diseases which is very high ratio in comparison to other where this ratio is less than 0.5. The presences of so many chemicals are considered as call to various health ailments like TB, heart ailment, skin, breathing problems, allergy, gases, anemia, asthma which did not exist 20 years ago have now come in a big way.

### **Conclusion**

Pollution control agencies work seems to be inadequate in comparison to the spread and increase of pollution which is out of control. NGO's and religious institution work will be effectively reducing the pollution by stopping paddy burning and controlling over smoke from industries. There is a strong need to work harder by all Agencies than they were doing in history. New construction of the industries should be banned. A large green belt around the city is necessary to control the pollution. Public awareness programs and public participation is very necessary and much effective in reducing the pollution. Some measures should be strongly followed such as height of chimney must be increased, old and polluting vehicles must be banned, regular pollution checkup, quality of oil must be Improved, CNG must be introduced. There is urgent need to encourage the uses of electric vehicles. For controlling the continuously increasing rate of heart and gastro diseases advance care is needed. Strict action plan must be compulsory by government to control on pollution.

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