



Pollution and its effect on Ecological Environment with special reference to district Bilaspur of Himachal Pradesh

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ABSTRACT: India is a large and diverse country. Its land area includes regions with some of the world's highest rainfall to very dry deserts, coast line to alpine regions, river deltas to tropical islands. The variety and distribution of forest vegetation is large. India is one of the 12 mega biodiversity regions of the world. Indian forests support a variety of ecosystems with diverse flora and fauna. A survey was conducted pertaining to the effect of pollution level and its effect on Ecological environment with special reference to district Bilaspur of Himachal Pradesh. Measures have been taken by the state government to overcome such problems. The HP High Court directed the state to impose a ban on the sale/stocking of 25 junk food items in plastic packaging in the state. The Himachal Pradesh State Pollution Control Board issued a notice to a Cement Company as to why their production should not be stopped for violating the environmental laws. The results of the ambient air quality monitoring indicated that the pollution level of the industry were 250.07, 316.67, 140.97, 156.94 and 177.22 against the limit of 100 which comes much higher and providing threat to ecological environment. The vehicular traffic, main part of which is from the cement producing factories in and around Bilaspur also contribute to environment pollution and climate change. This could impact the livelihood of 1.4 million people, who are dependent on the water and natural resources. State government is implementing the National Action Plan on Climate Change to improve the effects of climate change due to the pollution so that the deglaciation could be controlled. Participation of every individual is important so that we can breathe in a fresh environment.

Keywords: Ecological, Pollution, Environment, Climate change.

INTRODUCTION

Ecological issues are an integral and important part of environment. Poor air quality, water pollution and garbage pollution – all affect the food and environment quality necessary for ecosystems. India is a large and diverse country. Its land area includes regions with some of the world's highest rainfall to very dry deserts, coast line to alpine regions, river deltas to tropical islands. Himachal Pradesh is situated between 30° 22' 40" to 33° 12' 20" north latitudes and 75° 45' 55" to 79° 04' 20" east longitudes. According to Surveyor General of India, the total area of Himachal Pradesh is 55,673 square kilometers which is divided into twelve administrative districts of which district Bilaspur is of much importance as climate change is concerned. This district not only has the heritages of Himachal Pradesh like Govind Sagar Lake and the Fish Breeding Farm but also inherits the industrial development having the Cement Manufacturing Plant massive vehicular traffic emanating from cement factories which not only provides livelihood to people of the district but also is changing the ecological environment at a much faster rate leading to pollution and climate change of the district. All this is also contributing to imbalances and the trucks which ply from the cement plants are also one of the factors of environment pollution.

MATERIAL AND METHODS

The study was conducted in the different parts of the district, Bilaspur. The trend of pollution was collected from the site of pollution control board and personal interaction with the people of the districts that how pollution from different sources and the cement plant has become a threat to the district beauty.

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Primary data were obtained for the study through the structured questionnaires as well as personal interview with the people and the administrative staff of the district. Data collected include background information of the pollution level in the districts and the new level that has made the life of people full of difficulties along with threat to the Govind Sagar Lake and Fish Breeding Farm.

RESULTS AND DISCUSSION

Bilaspur district represented the highest level of pollution, among all the districts of the state, because of cement manufacturing plant along with maximum human's activity to land use .such as irrigation, agriculture and deforestation which fundamentally changed the environment. A sample of all stakeholders which includes urban, rural, administration, etc. from across district of Himachal Pradesh was interviewed using a structure questionnaire/Schedule. The questionnaire was designed in such way that a comprehensive understanding about the Existing Knowledge Level, Awareness and Preventive Practices of pollution in the district along with status of cement factory , vehicular traffic passing through this Dist. and Govind Sagar Lake.

Of the total population canvassed the gender composition of the sample shows 84 per cent were males and 16 per cent females.

Table 1: Sex wise distribution of Sample respondents

MALES	FEMALES	TOTAL
84	16	100

Age wise distribution of Sample respondents: It shows in all 25 per cent of the population canvassed were between the age group of 18-25, 25-45 were constituted 31 per cent, and while the remaining were in the age group of 45+

Table 2: Age wise distribution of Sample respondents

AGE IN YEARS	NUMBER OF RESPONDENTS
18-25	25
25-35	15
35-45	16
45+	44
TOTAL	100

Marital Status wise distribution of Sample respondents: Out of the total sample, 39 per cent are married and 49 per cent are unmarried and the rest is composed of widows, and divorce.

Table 3: Marital Status wise distribution of Sample respondents

Marital Status	NUMBER OF RESPONDENTS
Unmarried	39
Married	49
Divorce	2
Widowed	10
TOTAL	100

Along with these respondents the administrative staff of the district was consulted for the pollution level and threats to the sites.

In the survey it was known that the people of the district were well aware of the pollution level in the district with climate change in the district. Some of the respondents also cited a change in the environmental conditions pertaining to rainfall and seasonal changes. There is a very big difference between the existing environmental conditions and the environmental conditions prior to the establishment of the cement factory. Prior to the establishment of the cement factory and plying of huge number of vehicular traffic there was a thick forest cover of local trees and bushes, which was the backbone of the economy of this poor area. There was also very fertile land at factory site and in the surrounding area, some land has been acquired by the factory for infrastructural development and rest of land become barren after the coming up of the factory. But with the coming up of the factory all the trees and bushes have been cut down and the fertile land converted into barren land, which has given rise to many problems like, the problem of soil erosion, clean air, fuel wood, fodder economic disturbances etc. are very to count. Land has been acquired. The burning of coal to run the factory has adversely affected climatic conditions of the area. It has been observed that the establishment of cement factory has affected the traditional social structure, inter-caste relationship and cultural pattern of the area, initially it was very rigid but after the establishment of the factory the whole scenario has changed. The underground blasts at blasting sites of the factory also contribute to imbalances. The vehicular traffic, the major part of which emanates from the cement factories in and around Bilaspur Distt. Is also one of the main causes of environment pollution. Govind Sagar has registered sharp decline in 'Silver Carp' production, an exotic Chinese fish being grown in warm waters which otherwise naturally breeds in cold climate "Currently 'Silver Carp and 'Catla Catla' were being grown in the dam but Carp production is sharply dwindling as it has come down to 250 tonnes from existing 750 tonnes in last three to four years, whereas the dam has total fish production of 1100 tons annually". Concentrations of heavy metals and aquatic macrophytes have been also registered in the lake. Now this lake is no more homes to many migratory birds.

CONCLUSION

Like other developmental activities it is also based on the proverb the local pain for the nation gain. Undoubtly industrial development is the need of the hour and backbone of the progress of any country, but at the same time these developmental activities *at what cost* .Present study was undertaken only to explore relationship between industrial development and environmental conditions of the area at micro level without holding any one responsible for the current scenario.

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