AIRO JOURNALS
Free / Unpaid
Peer Reviewed
Multidisciplinary
International

ISSN: 2320-3714
Volume:3 Issue:1
July 2022
Impact Factor: 6.3
Subject:Humanities

COMPARATIVE STUDY OF AIR POLLUTION IN AJMER CITY WITH OTHER POLLUTIONS

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Abstract: In this paper we are presenting the Comparative Study of Air Pollution in Ajmer City with Other Pollutions. The increasing air pollution on the earth has become a topic of burning problem globally today. Since it has no boundaries of its own, there is no place on earth that does not suffer from this problem. Many researchers have been presented in this regard by various geographers and scholars. Efforts are being made continuously by them to reduce the increasing pollution and its effects on the earth. In this context, the dissertation presented by the researcher is based on "Impact on human health by air pollution in Ajmer city".

According to the survey of Ajmer city, toxic gases from industries and vehicles, construction and manufacturing units, quarrying, domestic waste, as major sources of polluted air in the city. As well as other environmental pollution. The area's most affected by the air pollution emanating from these sources have been RICCO industrial areas, Beawar industrial areas and Gagle areas of the city

Keywords: Air pollution, Ajmer City, Human Health, Earth, water, air, noise and soil pollution etc.

Introduction

Earth is such a planet on which all living beings and plants depend for their needs. Due to these activities, many types of pollution in the environment are increasing in a big way. Pollution has a nature of its own. In this context, the researcher has done research work under "Main sources of air pollution" in chapter three of the dissertation. Apart from these air pollutants, other pollutants

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Volume:3 Issue:1
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are also responsible for pollution in the environment, which are mainly expressed in the form of water, air, noise and soil pollution. The whole world is suffering from the harmful effects of these pollutions, from which India is also not immune. In this chapter, research analysis of these environmental pollutions is being presented.

Water -

Water is a very important element for all living beings and plants. Water is absolutely essential for performing all the functions of life, which is a valuable resource available on earth. In other words regarding the utility of water, it is the basis of life of all living beings. Due to the high availability of water on the earth, it is surrounded by three-fourth part. Thus 97 percent of the available water is saline which is not potable. The remaining 3 percent water is useful, out of which only 1 percent water is available for human use due to 2 percent being in the form of glaciers and snow.

Water Pollution -

Water has its own composition; the parameters that are used to determine its pollution level are temperature, color, odour, turbidity, conductivity, density, dissolved suspended matter and the amount of solids. Salt and nature of water, Hardness of water, Acidic and alkaline nature, Pesticides, herbicides, pesticides, amount of chemicals, chlorides, chromium, lead, amount of metallic substances, mercury, nitrate, and nitrogen content, ammonia, biological oxygen demand, The chemical properties of water are determined by parameters like pH value, dissolved oxygen, amount of detergents etc. For this bio oxygen demand, chemical oxygen demand, dissolved oxygen and pH. The value of is taken as the basis. Apart from these parameters, water pollution is also known from biological parameters like aquatic bacteria, coliform, algae, virus etc.

Many factors play a role in contaminating the water, mainly the excreta from domestic and public toilets which is released into rivers and ponds. These pollutant substances are polluting it by reaching rivers and water bodies. Similarly, soaps and other chemical detergents are used in the cleaning and washing of clothes and utensils in large hotels, restaurants, etc., which are themselves toxic. All these together increase the level of pollution in the water. Industrial units are also responsible for water pollution. The impurity of the water increases due to the immersion of

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Volume:3 Issue:1
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harmful substances in the water. The storage of clean water is getting destroyed due to washing process of coal and cleaning of other raw materials. Washing of woolen, cotton cloth and jute, dyeing of leather, manufacture of alcohol, paper etc. and oil refining are also polluting the water on a large scale. These impurities are not only increasing the pollution in the water but also harming the environment. In the context of water pollution, 1250 tons of different types of salts are being released per hour in the Rhine in Germany's Rural region. Similarly, in the river of Italy, every year 300 million tons of chemical substances are being released in the form of mercury, cadmium, lead, etc. Due to the increase in the amount of chemical substances in the water, its use is becoming unfit for drinking water and irrigation.

Due to the increase in the population in the cities, due to the construction of houses, buildings and factories for residence, various packing related items generate such waste which is dumped on the banks of the nearby water bodies. Due to the lack of proper disposal of this type of waste, the garbage remains lying on the roads. Along with the rain water, this waste flows into rivers and water bodies. Due to their slow decomposition in water, they cannot be separated even by water purification method. Pollution remains in the water for a long time by such substances.

One of the main reasons for polluting the water is the chemical substances used in the production of crops like fertilizers, disease killers, weed killers, pesticides etc. Agricultural production is increased by using them in large quantities. By using chemical substances in excess of the standard level, they dissolve in the water and pollute it. These polluted substances are carried by the rain water to the water bodies and rivers. Similarly, due to excessive use of nitrogen, potassium and phosphorus in the form of chemical fertilizers in agricultural production, there is eutrophication in water. Due to which plants and animals start growing in more quantity in the aquatic areas. These insecticides also greatly reduce the fertility in aquatic animals and in birds, their eggs break before maturity due to low calcium due to its effect.

Water Pollution in India

Water pollution is a big problem in India. The biggest source of which water without treatment, which is part of the water is discharged from the fields, domestic waste, sewer, and industries. At present, the condition of water sources is so serious that no source is clean. Urbanization and

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uncontrolled population are the main causes of water pollution. The research done in the last years has revealed that urbanization has increased rapidly. In other words, we can also say that this type of urbanization has left its indelible mark on the water sources of the country, which is continuously polluting the environment.

2600 kms in India The longer river Ganges extends from the north Himalaya Mountains to the Indian Ocean. In Hindu beliefs, people have a sacred reverence for the Ganges, its use as a source of drinking water, it is said to wash away sins in the divine form. Maa Ganga aarti is also held at many ghats of the Ganges in the country. There are some parts of the river where the pollution has increased so much that it has become dangerous to do activities of life like bathing, water sports etc. The river is being polluted continuously by many people and small and big businessmen and factories. Residents of many cities burn the dead bodies on the banks of the river and throw the ashes of the pyre in the rivers considered sacred. Due to such customary traditions, today the river Ganges is getting dirty and the level of pollution is increasing. Research done in Kanpur district of Uttar Pradesh, a state of India, has revealed that even after the appeals of many social organizations and government actions, the chemical substances coming out of the leather industry are being directly expelled into the water. Due to which, due to the spread of foam on the surface of the water in the river, the organisms found in the river water are dying due to lack of oxygen. In Kanpur district, the water of the river appears red in color due to the most contamination of the Ganges river. According to World Bild Life, due to excessive pollution in the river water, the number of dolphins in the Ganges river has been reduced to less than half in 33 years. According to the Central Pollution Control Board, in the year 2017-18, 37 of the 41 sites through which the Ganges river passes through pre-monsoon were polluted. At the same time, after the monsoon, the water of the river was clean only at one place out of 39, this place was Haridwar. According to the Central Pollution Control Board, out of 39 places through which the river Ganga passes, only one place has clean water of the Ganges after the year 2018-19.

Polluted Water in Rivers

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Figure 5.1: Contaminated water flowing in river

According to the Ganga River Biological Water Quality Assessment, about 37 out of 41 sites downstream of the Ganges have recorded water pollution in the moderate to severe category before monsoon this year. From which it is clear that the 97 cities of the population settled in the major part of the river discharge 2.9 billion liters of pollution into the water every day, which has the current capacity of 1.6 billion liters per day to remove and clean it. In this way, it is clear from the increasing pollution that more than one billion liters of polluted water reaches the Ganges river every day, which includes the polluted water of the sewer. This situation has become so frightening that due to its impact in future, 3.6 billion liters of polluted water will flow in this area every day by the year 2035. Many people's movements are being organized from time to time by social

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workers to stop the increasing pollution in the rivers. In this context, the Government of India is also running important programs like Namami Gange 'The Great Ganga Run' for the cleanliness of river Ganga.

Effects of water pollutants on human health

Water is such a biological element, which is used by all types of animals and plants. Due to which pollution is having the most harmful effect on humans and micro-organisms. It causes fatal diseases like cholera, tuberculosis, jaundice, dengue, polio, encephalitis, filariasis, malaria, gastroenteritis, dysentery, typhoid, intermittent fever, diarrhoea, in humans. Consumption of water containing fibers coming out of such industrial areas where there is excessive grinding of stones, causes cancer and stomach diseases in humans. Water containing mercury reaches the body of fishes and other aquatic organisms, by consuming which people get a fatal disease called Minimata.

Using the water coming out of industries and cities, the soil of the fields becomes infertile, as a result of which their fertility is also decreasing. By irrigating the fields with such polluted water in which the presence of alkali and acid is more, the micro-organisms are destroyed. Due to the increase in the concentration of organic and inorganic nutrients in rivers, lakes and ponds, the number of plants also starts increasing. Viruses are also produced in such polluted water, due to which dangerous diseases like cholera, dysentery, typhoid, jaundice, fever, malaria etc. Apart from these diseases, consuming such water causes worms in the stomach and many types of skin related diseases. Due to stagnation of polluted water for a long time, mosquitoes, insects and flies also start to arise in it, which are helpful in spreading many diseases. According to the Central Pollution Control Board, the main cause of dengue fever spreading in Delhi in October-November 1996 was attributed to the breeding of specific types of mosquitoes which breed in contaminated water. Due to this type of fever, more than 200 deaths occurred in Delhi city alone and more than 2 thousand patients were admitted to the hospital.

Due to water pollution, there is a crisis in the supply of drinking water in the metros. Due to the increasing problem of drinking water, the tension in the mutual relations of different countries is clearly visible. There are many water sources on the earth which are dominated by more than one

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country. There is a dispute among themselves for their rights over such water sources. For its solution, it is necessary that all the countries should prepare a future strategy to overcome the shortage of water by solving the problems with their understanding.

Government of India Cleanliness Campaign an initiative -

The Swachhta Abhiyan was started by the Government of India in October 2014 with the objective of making the villages and cities of all the states clean and pollution free. Under which 4.16 lakh villages have been given ODF. (Open Defecation Free). And 19 provinces and special provinces are also ODF included in. WHO In the newly compiled research, it was told that before the cleanliness campaign in India, seven lakh people died every year due to diseases like diarrhea and cholera, which later came down to five lakh. If similar work continues in the field of cleanliness, then in the coming year more than three lakh deaths can be prevented.

According to the survey conducted under the cleanliness campaign in Ajmer city including Rajasthan, before the cleanliness campaign, the number of patients suffering from diarrheal disease due to contaminated water was more than 5.05 lakh, in which as a result of better efforts of cleanliness campaign, diarrhea in March 2018. The number of patients of the state has come down to 2.14 lakh.

Efforts for the old form of the Pushkar lake and Anasagar Lake

Pushkar Lake

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Anasagar Lake

Figure 5.2: Ajmer Lake

Table 5.1: Year Wise Status of Diarrhea Patient Children

S.No.	Year	Ajmer	Rajasthan
1	2014-15	6274	343457
2	2015-16	7232	505746
3	2016-17	9315	497067
4	2017-18	3334	214989
5	April 2018	222	15010
6	May 2018	404	34049
7	June 2018	1234	53625

Source: Bhaskar daily newspaper dated 16.09.2019

Noise Pollution -

Such a medium with the help of which any sound or sound which is produced by a specific type of pressure wave is called sound. Its transmission mainly depends on the density and elasticity of gas, air, liquid (water) and solid. The intensity of sound is expressed in watts per square meter of

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area. These waves propagate in a spherical form in the air in all four directions towards the center of origin. The speed of sound waves decreases with increasing distance from the center of origin, which comes back after colliding with solid objects. If the sound produced, whose tolerance limit starts feeling unpleasant in the ears, then it is called noise. In other sense, such unwanted sound that causes unbearable pain or suffering to the human ear is noise pollution. When the loudness of sound is high, it is also expressed as unwanted noise or noise. That is, the sound devoid of musical rhythm, which is unpleasant to human beings, is noise pollution. It is known from many researches that such an unbearable sound that produces unwanted noise or the sound produced by human or machine is loud, hoarse and dissonant, and then such a situation takes the form of noise pollution. This pollution is mainly the result of modern civilization.

Which sound is audible or non-verbal in the public mind, its relation depends on the nature of the human being. According to research done on sound, a sound may be pleasant to one person, and then the same sound may be unpleasant or noisy to another person. Similarly disco music is sweet to some while the same music becomes unpleasant to peace loving people. In personal research done on sound, it was found that the relation of sound also depends on human age. The sound intensity that a human enjoys in his youth, the same sound intensity, he starts finding it unpleasant in old age. That is, the intensity, impulse, interval and type of sound depend on the thinking and tolerance of human beings. Noise is determined on the basis of anxiety, annoyance, speech disturbance, damage to the ear, ability to work, etc.

Table 5.2: Major Sound Sources and Sound Intensities

S.No.	**Sound Source**	**Loudness of the sound level (in decibels)**
1	Noise or first stage of sound	0
2	The sound of leaves	10
3	Whispers	30
4	Sound of Typewriter Machine	50
5	Television	70

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6	Diesel Truck/Traffic Sound	80
7	Screaming Sound	90
8	The roar of a lion	95
9	Factory Wyler	110
10	Airplane engine sound	120
11	First stage of unbearable noise/pain	130
12	Rocket Engine	180
13	Volcano Eruption	190

Source: Central Pollution Board Delhi.

The above table shows the parameter measurement units related to the intensity of sound. Decibel is the unit for measuring sound intensity, whose symbolic form is hard. The lowest position of sound in sound intensity is initialized from zero. 40 to 50 decibels are tolerable for sound efficiency in the human ear. Under normal circumstances, when a person breathes, the intensity of sound at that time is 10 decibels. Similarly, there is a whispering sound at 30 decibels. Sound intensity of 50 to 55 decibels starts disturbing the sleep of a sleeping person. There is a sound of 60 decibels in normal conversation, while the sound intensity of 90 decibels is produced by automatic vehicles like motor-car, truck, scooter, bus, motor-cycle and mixer grinder etc. Aircraft produce 110 decibels, jet aircraft 150 decibels and rocket engines produce 180 to 195 decibels of sound. According to the analysis of various researches, the sound of 80 decibels starts having its adverse effect on the ears, due to which the sound of 120 decibels with increasing intensity causes unbearable pain in the eardrums. There is also a possibility of bursting of the eardrum of a person when there is a sound of 120 decibels or more. Due to which the person's hearing ability is destroyed, he can also become deaf.

Effect of noise polluting factors

The nature of sound or noise is mainly divided into stationary and moving sources. The static source includes the rapid rattle of machines operating in industrial units, the explosion of bombs, the sound of dynamite, the moving machinery or equipment in radio and sound amplifiers. In

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which mainly the noise from motor vehicles, trains, rocket engines and aircraft has been included. Many activities are responsible for the increase in the level of noise pollution in India, among which the increasing noise intensity by means of transport is trains, airplanes, two wheelers, motors, temps, taxis, etc. In this way, automatic vehicles usually generate 90 decibels, the sound of an airplane landing at 150 decibels and rocket engines generate sound intensity of 180 to 195 decibels. The horn of cars and other motor vehicles produces 85 decibels and a motorcycle without silencer generates 120 decibels of noise. Noise pollution is caused by explosions in rifles, cannons, shelling, trucks, bulldozers, firecrackers, jack hammers, cranes, crushers, stone crushers and breaking rocks. Listening and watching movies, orchestras, pop music, drums, drums, drums, and sirens, which are useful for entertainment in homes, cause the eardrums to burst. One of the reasons is the noise pollution generated in the programs organized in mosques, gurudwaras and churches and in bhajan-kirtans, worship-jagrata etc. during the rituals in social customs and religious traditions. In these rituals, the atmosphere becomes affected by noise pollution at an intensity of 90 decibels. India is a country with different culture and traditions and many types of Teej-festivals are celebrated here. Out of these festivals, Diwali festival is also the subject of great enthusiasm by the people here. In which crackers are burst, due to this unbearable noise as well as toxic fumes pollute the whole environment. Pollution is increasing due to the increase in noise intensity due to such human activities. In natural disasters, mainly the roar of clouds and the sound of high-speed storm-storms are also involved in noise pollution.

Noise Pollution in Ajmer City

Due to the increasing population in Ajmer City, environmental pollution has also reached its peak. Due to the excessive increase in pollution, at present, Ajmer city is being counted among the most polluted cities of India.

The average noise level has increased from 75 to 95 decibels at important intersections and roads of Ajmer city, which is likely to increase further in the future. The increasing noise of vehicles and excessive and irrational use of pressure horns other activities in the city include industrial activities, loudspeakers, bands, DJs. etc. are also the main reason for the increase in noise level. Due to which the increase in noise pollution in the city is natural.

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According to the research survey conducted under noise pollution in Ajmer city, the light festival celebrated in the form of cultural activities at the social level, which is used in large quantities to celebrate as Deepawali, the effects of flammable and acoustic firecrackers on the environmental noise level has analysed. The ambient noise level rises further during the Diwali season. Because most of the crowd of people starts gathering in the markets for activities like buying and selling. Also, on this occasion, inflammable and acoustic fireworks are done by the citizens. Commonly used explosives in fireworks include dextrin, charcoal, radgum, and metallic fuels such as aluminum, titanium and magnesium that produce a piercing sound. Due to the effect of such substances, the intensity of the excessive smoke generates the level of noise pollution of 120 decibels and above. In such a situation it is clear that it becomes very dangerous for the environment. According to research, noise pollution is a deprived area because most of the people in India do not accept noise as pollution. The main reason for this is that no residue of it is visible in the atmosphere and most of the people are not even aware of the damage caused by it.

Ambient noise level in study area Ajmer City during Diwali festival

Related conditions -

From research in Ajmer City, it has been found that the study of ambient noise level conditions during the past four years, the data obtained in the research work related to the years 2011, 2012, 2013 and 2014, respectively, in the commercial area, residential area and quiet areas, has been found. Collected at fixed points for representation which have been used for analysis in research work. The time period for obtaining these data is related to the conditions from 06.00 pm to 12.00 pm.

Table 5.3: Noise level before Diwali festival and Deepawali day

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No.	Venue	Noise Level (Hard) from 06.00 PM to 12.00 PM											
		Year 2011			Year 2012			Year 2013			Year 2014		
		Higher	Minimum	Average	Higher	Minimum	Average	Higher	Minimum	Average	Higher	Minimum	Average
1	Commercial Area												
	A. Before Diwali	78.9	63.5	71.6	74.1	59.1	69.2	70.6	64.9	68.5	79	62.6	71.36
	B.Diwali Day	91.2	77.4	84.3	96.2	72.1	84.6	92.5	78.8	86.28	95.6	81.6	87.8
2	Residential Areas												
	A. Before Diwali	73.1	50.0	63.2	78.9	53.8	67.8	71.6	60.0	66.0	79.1	61.8	69.5
	B.Diwali Day	73.2	82.9										
3	Quiet Areas (Hospital)												
	A. Before Diwali	60.3	46.2	56.5	62.3	46.2	56.8	57.2	46.0	52.4	63.5	43.-6	53.9
	B.Diwali Day	57.3	71.5										

Source: Based on Records of Pollution Control, Ajmer

Table 5.4: Variation of Noise Level of Diwali Day from Normal Noise Level and Standard Noise Level (in Percentage) Year 2014

No.	No. Variation from venue	Normal Noise Level (in percent)			Variation from daytime standard level (in percent)		
		Higher	Minimum	Average	Higher	Minimum	Average
1	Commercial Area	+21.01	+30.35	+23.03	+48.6	+25.5	+35.0
2	Residential Areas	+21.99	+18.44	+19.28	+75.45	+33.09	+50.72
3	Quiet Areas (Hospital)	+29.6	+31.42	+32.65	+64.6	+14.6	+42

Source: Based on Records of Pollution Control, Ajmer

In the above table, the ambient noise level of commercial, residential and quiet zone has been analyzed in research area Ajmer city during Diwali festival.

Analysis of noise level in commercial area -

In order to understand the situation of noise level during Deepawali festival in commercial areas Central Business Area has been taken. Apart from being the biggest center of retail trade, many offices like Bank, Post Office, Government Press, Sectional Officer, Lashkar etc. are also located here. A large number of people visit this place, which increases further during the festive

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occasions. The average noise level shows an increasing trend during the Diwali festival in the last four years. In the year 2011, the average noise level at the time of Diwali festival was recorded at 84.3 decibels. Whereas in the year 2012, 2013 and 2014, this level increased to 84.6, 86.28, and 87.8 decibels respectively. On analyzing the maximum level of noise during Diwali in the city, this level was 91.2, 96.2, 92.5 and 95.6 decibels in the years 2011, 2012, 2013 and 2014 respectively. This level was maximum in the year 2012, which decreased slightly in 2013 and again increased in the year 2014.

The data of both the situations for the year 2014 has been taken for comparison with the noise level found during the Diwali festival with the noise level before the Diwali festival in commercial areas. In which, after observing the situation of the business sector Maharaj Bade in the year 2014, the maximum noise level of Diwali day increased by 16.6 decibel to 95.6 decibel from 79.0 decibel before Deepawali, which was 21.01 percent more than the noise level before Deepawali. Thus, when compared to the fixed daytime standard 65 decibels for commercial sector, it was 48.6 percent more than the standard level.

According to the above, it is clear from the research survey conducted in commercial areas that the ambient noise level in these areas during Diwali festival has been higher than the normal noise level.

Analysis of noise level in residential area -

The data received from Colony was analyzed to observe the ambient noise level in the residential area of Ajmer city. The trend of increase in ambient noise level has been observed in residential areas during the festival of lights, Diwali. The average noise level in these residential areas at the time of Diwali festival was recorded at 74.61, 78.2, 79.4 decibels in the years 2011, 2012, 2013 and 2014 respectively. Whose maximum noise level in these years was 86.2, 92.4, 88.8, and 93.5 respectivelywhich shows the general trend in the noise level.

The noise level of Diwali day with the help of data obtained from year 2014 has been compared with the noise level of the pre-Diwali time. In the year 2014, the maximum noise level of residential area Colony was recorded at 79.1 decibels, which increased by 21.99 percent to 96.5 decibels on Diwali day. This noise level increased by 75.45 percent to 73.2 decibels from the fixed

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daytime noise level of 55 decibels for residential areas. This minimum noise level has also been 33.09 percent more than the standard level.

It is clear from the research survey of noise level conducted in Colony, the residential area of the research, that during Diwali festival there is a lot of increase in ambient noise level which arises due to excessive use of acoustic firecrackers.

Analysis of ambient noise level of calm zone -

Similarly, 100 meters of land around Ajmer city's important hospitals, educational institutions and courts etc. is kept administratively quiet and noise-free. The most important hospital of the area, has been kept to observe the noise level. On observing the noise level data obtained from this area, it was found that the average noise level of the quiet area was recorded higher than the standard level even on normal days. The region has recorded an increase in the noise level further during the Diwali festival time. In the year 2011, 2012, 2013 and 2014, the ambient average noise level near the quiet area during the Diwali festival was recorded at 71.3, 63.2, 70.46, and 71.5 decibels respectively. From which it is clear that there was some decline in the average noise level in the year 2012 and after that the trend of increase in noise level was recorded again. Similarly, during the Diwali festival, the maximum noise level of this area in the year 2011 was 82.2 decibels. In the year 2012 and 2013, this level came down to 75.2 and 75.8 decibels respectivelyand again increased to 82.3 decibels in the year 2014.

For analysis of the ambient noise level of the city's research area comparing the noise level before Diwali and the noise level of Diwali day, it was found that in the year 2014, the maximum noise level before Deepawali in this area was 63.5 decibels, which was on Diwali. 29.6 percent rose to 82.3 decibels. This level was 50 to 64.6 percent more than the standard level prescribed for calm areas. Similarly, the minimum noise level in the pre-Diwali situation was recorded at 43.6 decibels. Which had increased by 31.42 percent to 57.3 decibels on Diwali day. This minimum noise level was also 14.6 percent above the standard level.

Thus it is clear that during the Prakash Parv Deepawali, in all types of areas of Ajmer City, the noise level has increased from 18.4 percent to 32.65 percent in comparison to the normal. Compared to the standard level, there has been an increase in the noise level ranging from 14.5

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percent to 75.45 percent in the years 2011, 2012 and 2013, more or less the same situation was visible which is worrying.

Increasing effect of noise pollution

Noise pollution affects not only human life but the entire animal world and plants. Due to which in humans, sleep disturbances, difficulty in hearing and irritability usually arise. Among other effects, deafness is also a major cause of sound intensity. Adequate sleep is necessary for human health. Due to the increase in noise level, sleep is disturbed and sleep is not complete and symptoms of irritability and anger start appearing in the person.

The main reason for the problem of deafness in humans is excessive noise. Exposure to loud noises can also cause permanent deafness or hearing loss. According to the survey conducted in the research area, due to the increase in the noise level, a person who encounters 2000 frequencies of sound of 80 decibel intensity, then his hearing will decrease by 15 decibels. Loud sound not only makes it difficult to hear. Rather, the person listening has to use a higher tone. Continuing to speak at a high level leads to the speaker getting into the habit of screaming loudly. Due to excessive noise, the concentration of man starts getting disturbed. Thus, due to the lack of concentration of the drivers, more accidents on the roads increase. Psychological effects have also come to the fore due to excessive noise. In which abnormal changes in the behavior of humans and animals, mental fatigue, annoyance etc. Due to such a condition for a long time, people get a serious disease like neurotic mental disorder. Which gives rise to mental neuroticism (madness). In addition to these problems, increasing noise pollution also causes high blood pressure, excitement, heart disease, ulcers, mental fatigue, disturbances of the digestive system, muscle tension, and diseases of the stomach and intestines in humans. According to another research, it also plays a major role in increasing cholesterol by reducing the white cells of the blood. Due to malformations in the fetus, incidents like miscarriage have started happening in more number. It also damages the heart, brain and liver. Studying a research done on the situation caused by increased noise level, it has been found that pregnant women living in settlements near airports give birth to babies with low birth weight due to its effect.

According to a research done on 50 people under noise pollution caused by increasing the intensity of noise level, due to excessive use of headphones or sound-generating devices in people, its

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harmful effect is not only on the ears but also on various parts of the body seems like. Due to this, deafness occurs in people at an early age. Listening to loud music causes damage to the heart as well as the ears. Is. Another reason because of the high intensity of sound is that it also becomes the cause of cancer. Due to all these reasons, people start having problems like headache or sleeplessness, nervousness, restlessness, etc. Due to the high intensity of sound, the number of bacteria in the ear increases twice as fast, due to which hearing loss in the ear gradually decreases to 40 to 50 decibels, which is much less than the standard capacity of 90 decibels. it occurs. Due to the loss of hearing in the ears, distant sounds cannot be heard which leads to the problem of deafness. To keep his hearing healthy, a person needs to stay away from the medium of sound of more than 90 decibels.

Soil -

The physical composition of the earth is made up of different types of surfaces, the upper surface of the surface of which is not covered with water, is called soil. Soil mainly contains minerals, fossils, water and air in the form of four components. The content of mineral matter is highest in the dry surface of the soil. As the remainder of the soil, water and air are located in 50 percent of the volume of the stomata between the solids. The ratio of these ingredients keeps on increasing with each other. In the rainy season, due to the supply of water to the vacant places of dry soil, the air content in it also decreases. As soil percolation and evaporation take place, the amount of air content in the soil increases again.

In nature, soil is the top layer of the earth, which is an important component. On observing any cultivable land, we find that its status for its origin and management is different in its appearance, characteristics and productivity, which is equally important in agriculture, food security, forestry environment and quality of life. performs important tasks.

Soil Pollution -

Soil is a natural resource. In this, mainly salts, minerals, organic matter, gases and water all have an important place, due to which undesirable changes start to deteriorate the quality of the soil. The main reason for such an effect is rapid soil erosion, lack of bacteria, and moisture, less or more

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than the required amount, lack of fauna and soil concentration. To meet the needs of the growing population in the world, due to the excessive use of chemical fertilizers by humans to increase agricultural production, there is an imbalance in the soil structure. Similarly, for the protection of plants and crops, insecticides, insecticides, and insecticides as well as weedicides are sprayed to prevent pests and diseases. All these substances are mainly in the form of solid, liquid or gases, which dissolve in the soil and affect its fertility and the activity of bacteria. On soil quality, Dr. UB According to the research done by Singh, human is such a creature that continuously exploits nature for its needs and the existing soil does not get rest. Due to these conditions the reclaiming capacity of the soil is getting degraded. Due to lack of irrigation resources, it started irrigating the soil with polluted water, as a result of which the bacteria present in the soil are losing their activity. The substances present in the air are continuously polluting it by coming in contact with the atmospheric layers. Which mixes with rain water in the soil and increases its acidity. Due to the increasing amount of acid in the soil, its quality and fertility are decreasing. In many countries of the world, mainly Norway, Sweden, India, Finland etc., due to excessive acid rain, forests are being damaged. According to another research, due to acid rain, there has been a significant reduction in the pH value of the soil in the states of Ontario and Quebec of Canada. Chlorine and nitrogen gas emitted from factories is polluting the soil by reacting with water. Similarly, the particulate matter concentration increases when particulate solids emitted from coal mines, quarrying areas and thermal power plants enter the soil. The harmful effects on its quality are also seen from the metallic particulate matter released from the copper mica mines. Apart from these elements, other such pollutants in which magnesite dust is mixed with the soil increases its alkalinity, due to which there is a deficiency of essential elements of the soil like potash, calcium, phosphorus and magnesium.

Status of soil pollution in Ajmer city -

Ajmer is a large and prosperous city. Here the urban population is increasing day by day and continuous efforts are being made to increase the production of crops in the villages for the supply of food grains. Due to the continuous use of chemicals in the fields, the quality of the soil is

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deteriorating here. Along with this, due to the excessive use of chemical fertilizers and insecticides, the biological properties of the soil are also declining, due to which its fertility is also declining. Soil is a resource that is limited and only 22 percent of the earth's land area produces food to feed 95 percent of the world's people. Of this, about a third, about 33 percent, has become barren. The main reasons for such soil conditions are soil erosion, pollution and deforestation. Such harmful conditions for the soil have happened only in 50 years. Due to imbalance in the ratio of nutrients required for the soil of the fields, today the health of the soil is continuously deteriorating.

Decreased soil quality

Soil is a major resource in the earth's surface. According to various researches done in relation to the soil of India, the lack of nitrogen in the soil here is ubiquitous. The deficiency of zinc and iron in various micronutrients was found mainly in many areas of the country. Zinc deficiency is mainly found in the soils of Punjab, Uttar Pradesh, Haryana, Andhra Pradesh, Bihar, Uttarakhand, Gujarat, Tamil Nadu, and Rajasthan. Nitrogen is most important for maintaining the fertility of the soil, which maintains the storage capacity of phosphorus and potash in the soil.

To increase the quality of soil and get good crop, organic matter should be used in the fields on a large scale, it is the food of bacteria, its deficiency destroys the bacteria. To maintain the fertility of the earth, stalks should not be burnt in the fields. According to experts, the main reason for the lack of nutrients in the soil is not adopting crop rotation. Apart from this, the lack of use of cow dung, green manure, vermi compost etc. is believed to be the reason for this problem. For fertile soil, it is necessary that soil testing should be done from time to time.

Organic farming good results for the environment

Clay acts as a natural water purifier. Which has the ability to reduce the effects of climate change by irrigating and absorbing carbon in large quantities. Therefore, the conservation and nutrition of the soil is very important for future happy and prosperous results. The country has become self-sufficient in food grains due to the Green Revolution. Between 1970 and 1990, there was a 25% decline in soil nutrients. However, in the meantime, an increase of 50 percent has also been

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achieved in the yield rate. As a result of these conditions, many new diseases have also arisen due to soil pollution in the environment.

Factors affecting soil

Soil is a very important component of the earth, whose importance is necessary in the origin and development of all living organisms and plants. That is, soil or land is the basic and stable unit of the environment, which cannot be increased or increased. Due to industrialization and urbanization at a high level, the increasing population in the cities and the liquid and solid waste being expelled from them are continuously polluting it by mixing in the soil. Due to solid and chemical waste materials, the amount of pollution in the soil is increasing in the present time. For such a situation, mainly the waste from households, animal-houses, agricultural pollutant factors have started increasing so much garbage in the cities that its heaps are increasing. These waste dumps contain ash, glass, remains of fruits and vegetables, paper, cloth, plastic, rubber, leather, bricks, sand, metals, waste from animals, cow dung etc. In addition to these organic matters, the hazardous chemicals released into the air are sulfur, lead compounds, contaminating the soil.

Physically, soil erosion and degradation are also the main reasons for contaminating it. Naturally, strong rainfall, temperature, wind, topographic and botanical factors have a special place in influencing soil erosion. Similarly, man-made factors mainly cause deforestation and faulty agricultural techniques. Air is also a major factor in polluting the soil, among other factors. In which the smoke emitted from the chimneys of automatic vehicles, plants, factories and houses has a special role. These substances first reach the atmosphere and from there fall on the earth through rain. The use of biocidal chemical fertilizers to increase productivity in agriculture causes large-scale damage to the soil. These chemicals increase the yield of agriculture but as its side effects the soil is becoming infertile and its quality is decreasing.

Increasing impact on agricultural production due to air pollution

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International
ISSN: 2320-3714
Volume:3 Issue:1
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Figure 5.3: Farming affected by dust, soil and metallic substances along the roads

Industrial waste mainly consists of salts, iron material, paper, throat waste, rotten waste, plastic, aluminum mercury, copper, lead etc.

Table 5.5: Soil Affecting Factors

No.	Types of Soil Pollutants Soil	Affecting Factors
1	Physical pollutants	Erosion, volcanic eruptions, excreta, seismic waves, human activities
2	Biological pollutants	Bacteria, hookworms, leptospirus, eggs, spores, larvae of parasitic insects, etc.
3	Chemical Pollutants	Cyanide Wishes, Petrochemicals, Various Chemicals, Sulfur dioxide, DDT, Cement, Chemical Fertilizers etc.

Source: Pollution Control Board Bhopal.

Effects of soil pollution on public health

Due to changes in the physical composition of the soil, adverse effects are visible on the health of the people. These effects are far-reaching. That is, they are visible for a long time. Due to the

ISSN: 2320-3714
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increase in the amount of pollutants in the soil, its harmful effects are normally consumed by human beings through the consumption of food items, including raw vegetables, root vegetables and various other materials, many micro-organisms, bacteria and various pollutants enter their body gets done. Due to which the immune system of humans is also reduced mainly cholera, typhoid, amoebiosis, pattyphoid, diarrhea, enteritis dysentery become dangerous diseases. Tetanus Bairuli from heaps of cow dung in the soil causes a disease called tetanus. In addition to these diseases, the eggs and larvae of insects, fungi, spores, toxins, chemical substances like parathion and carboryl, DDT, aldrin, dieldrin and arsenic compounds etc.

Observing a research done on the effects due to increasing pollution in the soil, it has become clear that about 5,10,000 people die every year in the world due to the use of bio-pesticides. India is also not immune to these circumstances. In this context, in various states of India, where DDT is available in food grains to increase agricultural production.

Table 5.6: DDT content in different state crops(in milligram/kg by weight)

No.	Crops	Punjab	Uttar Pradesh	Andhra Pradesh	Haryana
1	Vegetables	0 to 1.11	-	0 to 10.00	0 to 1.52
2	Wheat	0 to 6.1	0.41 to 10.00	-	0.6 to 1.0
3	Pulses	0 to 102	10.00	0 to 8	-
4	Oilseeds	0 to 1.28	10 to 175	-	-
5	Milk	0.10 to 27	-	0 to 5	-
6	Butter	0.3 to 8	-	0.03 to 3.39	0.63 to 6.94
7	Ghee	2.57 to 11	1.25 to 2.12 ,2.72 to 13	2.10	-

Source: Rajasthan Pollution Control Board Ajmer.

DDT on crops of different states in the above table. Surveys were conducted on the increasing amount of In which DDT for increasing production on almost all crops in the state of Punjab being used excessively. Similarly, in other states too, the effect of increasing pesticides in crops is that

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the soil is getting polluted here. It is the result of such circumstances that today due to the decline in the quality of food crops, the age is decreasing due to the loss of mental and physical capacity of man. Soil pollution has a direct effect on all plants and animals. The pesticides and chemicals added to the soil are reducing instead of increasing the growth of plants. These pollutants reach the plants through the roots, due to which the plants are not able to grow properly and due to its effect on their leaves, it turns yellow. The development of fruits and flowers also stops. These poisonous substances entering the plants and animals are making them harmful and poisonous.

Conclusion

Due to the depletion of ozone from the chlorofluorocarbon gas released by humans, due to excessive use of air conditioners and cosmetics, there has been a fear of serious diseases like skin diseases, cancer, etc.

Possibility of causing eye, throat and lung disease has also been expressed by the pollution of sulfur dioxide.

After accumulating in the atmosphere of toxic gases, these gases reach the surface in the form of acid rain and are contaminating the water of water reservoirs and also ground water.

Due to the increase in the concentration of nitric oxide in the air, it reaches the human body through respiration and at a rate a thousand times faster than oxygen, combined with hemoglobin, causes difficulty in breathing. Apart from this, it also causes swelling in the gums, bleeding in the internal parts of the body.

Due to the suspended particulate matter like lead, asbestos, zinc, copper, dust etc. emitted from industrial units and automatic vehicles, many types of life-threatening diseases occur in different parts of the human body.

Due to the sudden leakage of harmful toxic gases from the plants of chemicals and poisonous gases, the air pollution becomes so much that hundreds of people die in the blink of an eye.

References

[1] Saxena, P.N. : Transport Development in New Rajasthan, Agra Uni. (1960)

[2] Sarma K.K. : Motor Transport Its Development and Planning in Rajasthan Raj. Uni. Jaipur.

ISSN: 2320-3714
Volume:3 Issue:1
July 2022
Impact Factor: 6.3
Subject:Humanities

[3] Dixit, R.S. : The Transport Accessibility of market of Kanpur City, The Deccan Geography Vol. XIX No. 1 Jan- June (1981)

[4] Kayastha, S.L. : Transport and Communication in Himalayan Beas Basin. National Geographical Journal Indian 1960 , 6 (2)

[5] Mukheji, A.B. : Road Transportation Network Structure and Levels of urbanization in Rajasthan . The National Geographical Journal of India Vol. XX Part I March 1974

[6] Central Pollution Control Board, New Delhi (India).

[7] Pollution Control Board, Jaipur.

[8] Pollution Control Board, Ajmer.

[9] Singh, Savindra (1994): Environmental Geography, Prayag Book Building, Allahabad p. no. 464

[10] Singh, Dr. UB: Environment Physiography, MP Hindi Granth Academy, Jaipur.

[11] Sharma, Damodar (1996): Air Pollution, Sahityagar Prakashan, Jaipur.

[12] Dainik Bhaskar Newspaper: July 2009, p.No. 03 & Sept. 2008 Page No. 03

[13] Diwakar Prasad (2000): Impact of transport system on regional development in Ajmer region.

[14] DTIC, Ajmer.

[15] Office of the Commissioner, Industrial Department, Ajmer.