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CAUSE AND EFFECT OF ENVIRONMENTAL POLLUTION - AIR, WATER, NOISE &LIGHT

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ABSTRACT

As the of population increases the country faces different form of pollution which creates challenging environmental issues and cause climate changes in India. Pollution includes air pollution, water pollution, noise pollution, light pollution, garbage pollution, industrial pollution etc. Due to these factors, the environment gets polluted and, it spoils the natural environment. Air and noise pollution in India is creating serious issues with, most Indian cities violating the central government norms. This paper is a comparative study of the various pollution causes and effects.

Key terms: Pollution, Environment, Causes, Air pollution, Heat pollution, Humans, Climate

INTRODUCTION

The environment is a normal part of climate variability for virtually all regions. Due to this effect, it is necessary to act to save the existing water sources. Experience has shown that the democratic form of governance has handled drought more efficiently than others. Same is the condition in India before and after autonomy. This paper brings out the various environment effects. National guide-lines on environment management will reduce risk by developing better awareness and understanding of the environment and the causes of societal vulnerability. The principles of risk management will be promoted by build-ding better organizational functions through the develop--ment and function of seasonal and shorter term fore-casts, integrated checking and creating drought prema-ture caution functions. It can also recreate interaction information delivery systems, which help develop prep-aredness plans at all levels of governance. By these methods, we can adopt mitigating actions and program and create a safety net of emergency response programm-mers that ensure timely and targeted relief.

This paper brings the study on PM 2.5 characteristics. Samples were collected during both summer and winter. This study explores how the phenomenal explosion in population affects the environment, especially air. The differences in chemical composition in water during summer and winter were observed. It has been found that in winter there is an increased level of pollutants than in summer [Pant et al., 2015]. This paper focuses on the damages caused in fishes because of water pollution. A loss in the local region, anterior and posterior porting and breakage and porting in the structure is observed [Rajbir kaur and Anish Dua, 2015]. Miriam e*t al.*, [2016] in his paper discussed about air pollution due to the increase of population in urban areas, and suggest methods for moni-toring air pollution such as an online monitoring system with the help of a satellite. This helps to overcome the drawbacks of air pollution such as health and other economic impacts. This paper is focus on water pollution, in two urban and three rural areas in Tamil nadir, India. Disease surveillance was conducted between August 2010 to March 2012. Samples were collected from street water pipes and storage tankers in houses. It was obser-ved that the pipes which are used for water supply was the major source so contamination of water [Kulinkina, et al., 2016]

Environment Risk Management: In general risk is defined as the combination of the probability of any incident and the causes of that incident. Other definitions for risk, with various meaning are given in different articles and books. Risk is thus a multidisci-plinary concept and the meaning is based on the location and the subject. Environmental risk creates several prob-lems to the human community such as lives, health, live- lihoods, assets and service losses. These losses would be greater to those communities who live near the environ-ment. Some of the causes and the effects are described below:

High emission of gases in the air surface: This is one of the greatest causes of environmental pollution, all over the globe. It happens due to a variety of reasons such as industrial emissions, vehicle emissions and more. Due to this factor, air is mixed with content such as SO2, CO2 and NH3. This creates big changes in the ozone layer and causes various environmental effects such as more heat, heat rain and global warming. The table shows the various air pollution values in India.

Table – 1: Air pollution in India

S. No	Places	Pollution Value	Air Pollution Status	Pollution Index value	Air Quality	Status
01	Agra	89.29	High	92.90	10.71	Very Low
02	Ahmadabad	66.91	High	72.85	33.09	Low
03	Bhopal	69.74	High	71.81	30.26	Low
04	Bhubaneswar	59.64	Moderate	58.48	43.06	Moderate
05	Chandigarh	52.13	Moderate	57.60	47.87	Moderate
06	Chennai	68.33	High	77.72	31.67	Low
07	Delhi	88.76	Very High	92.87	11.27	Very Low
08	Goa	22.73	Low	46.64	77.27	High
09	Guntur	66.44	High	70.86	30.56	Low
10	Gwalior	82.69	Very High	81.95	17.31	Very Low
11	Hyderabad	76.75	High	82.57	23.25	Low
12	Jammu	100	Very High	89.66	0.00	Very Low
13	Kochi	60.00	High	66.58	40.00	Moderate
14	Mumbai	80.73	Very High	88.96	19.27	Very Low
15	Mysore	50.93	Moderate	59.06	49.07	Moderate
16	Nasik	36.46	Low	56.19	63.54	High

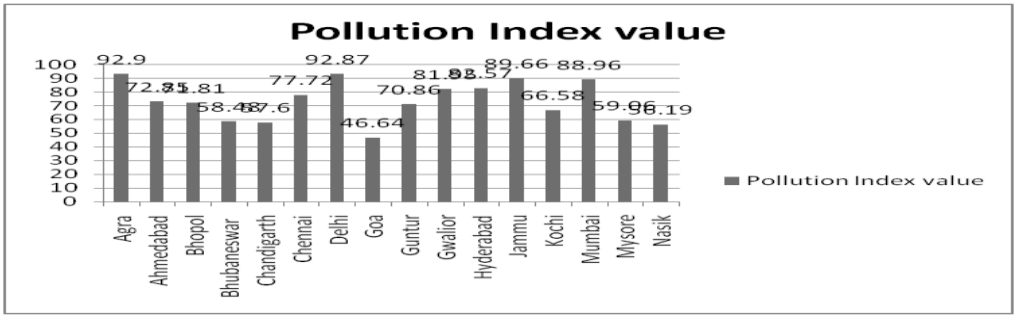

Fig 1. Place Vs Pollution Index Value

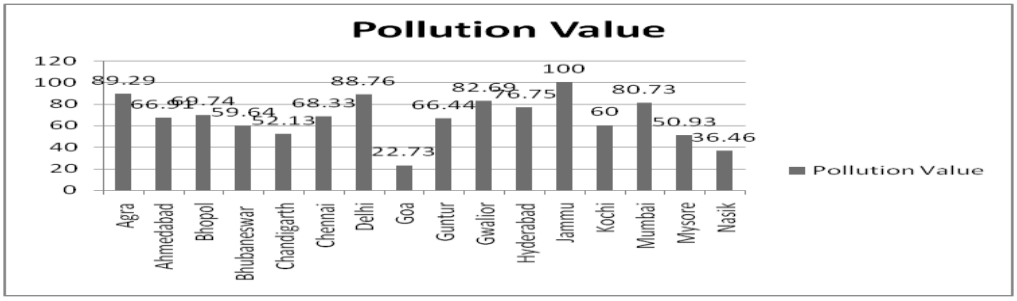

Fig 2. Place Vs Pollution Value

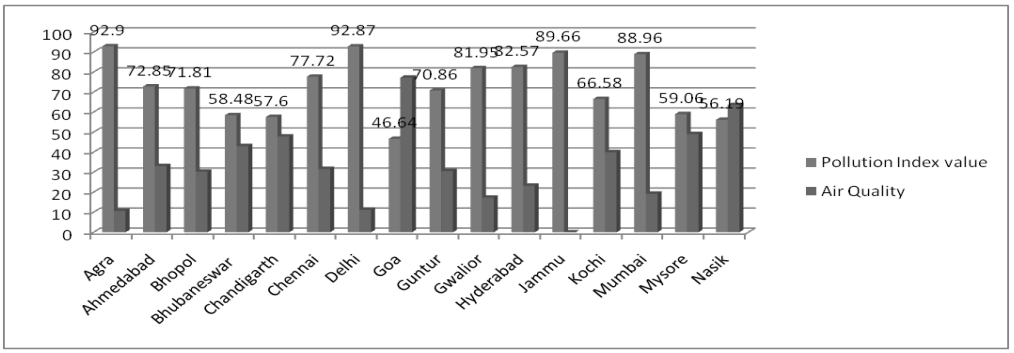

Fig 3 Places Pollution Value Vs Air quality value

Water Pollution: This is the second biggest threat for our nation. It occurs due to industrial pollution, leather and tanning industries, oil industries and chemical manufacturing company wastes and more industries waste, which are directly flushed into the water source All these wastes are directly linked with water sources and they are not purified before exiting the company. Due to this, humans are facing several problems, and marine life is also affected. There are several problems that arise due to chemical wastages such as dumping. The solid waste created a lot of problems because they take a long time to degrade it creates water pollution. Most of the industrial pollution consists of lead, mercury and cured petrochemicals which are extremely dangerous for humans and the environ-ment. Due to air pollution, acid rain happens, it also causes the water body, and all water nutrients values are increased, which reduces the oxygen value in the water. It is necessary to prevent the polluting of water source from the above. Some of the technique used to reduce water contaminates such instruct every industry before water get it out they treated properly before they reach outside of the environment, used proper tanks treat the water properly. The table below shows some of the places level of water pollution.

Fig 4. Polluted water mix the outside environment

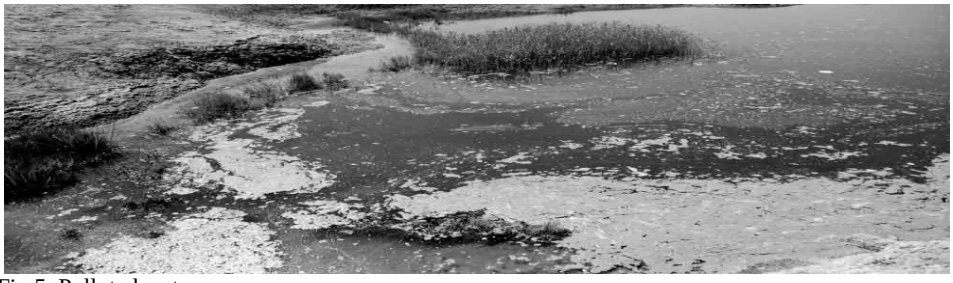

Fig 5. Polluted water source

Table 2 Water pollution in India

S.No	Places	Drinking Water Pollution Value	Pollution Status	Pollution Index value	Water Quality	Status
01	Agra	82.14	Very High	92.90	17.86	Very Low
02	Ahmadabad	46.09	Moderate	72.85	53.91	Moderate
03	Bhopal	53.33	Moderate	71.81	46.67	Moderate
04	Bhubaneswar	35.00	Low	58.48	65.00	High
05	Chandigarh	42.86	Moderate	57.60	57.14	Moderate
06	Chennai	57.65	Moderate	77.72	42.35	Moderate
07	Delhi	66.81	High	92.87	33.19	Low
08	Goa	29.17	Low	46.64	70.83	High
09	Guntur	40.00	Moderate	70.86	60.00	High
10	Gwalior	40.62	Moderate	81.95	59.38	Moderate
11	Hyderabad	60.05	High	82.57	39.95	Low
12	Jammu	50.0	Moderate	89.66	50.0	Moderate
13	Kochi	47.73	Moderate	66.58	52.27	Moderate
14	Mumbai	61.73	High	88.96	38.27	Low
15	Mysore	49.07	Moderate	59.06	50.93	Moderate
16	Nasik	45.45	Moderate	56.19	54.55	Moderate

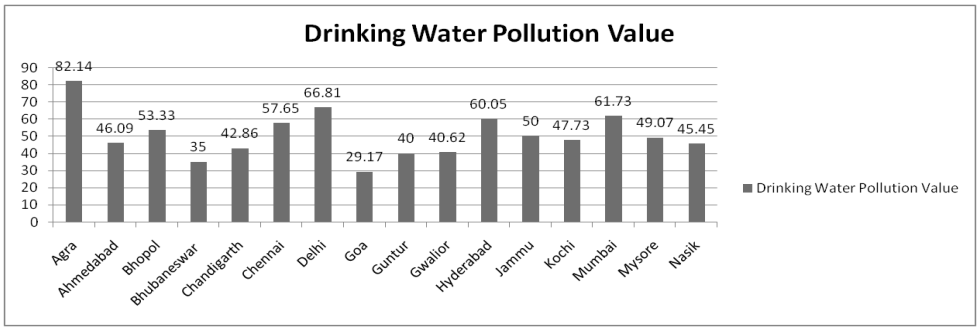

Fig 6. Place Vs Drinking Water Pollution Value

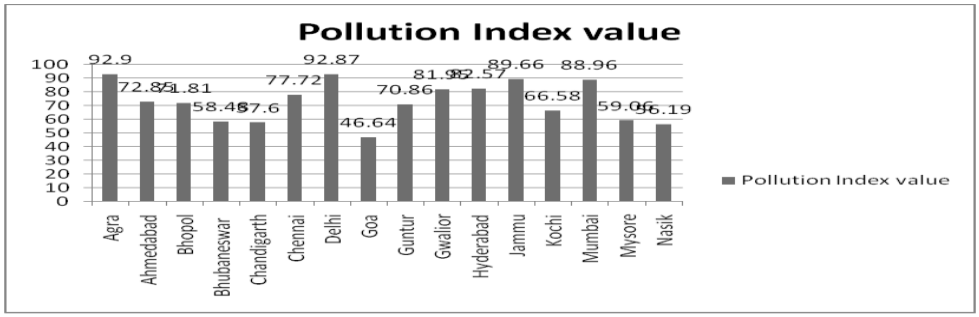

Fig 7 Place Vs Pollution Index Value

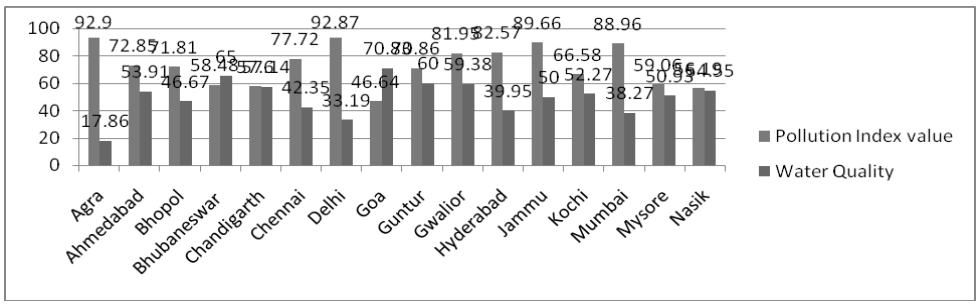

Fig 8 Pollution Index Value Vs Quality level

Noise and Light pollution: Living things in the environment need sound, without it they will not be able to communicate. Due to this, sound is needed in the environment but noise is not needed. Noise is defined as unwanted or undeniable sound. Due to technological developments, several sources produce unlikable sounds for example music systems, moving vehicles, pet's industrial noise, transport noise and more. Based on these factors, research on noise has identified that it not only affects humans, but also animals. Noises up to 115dB are acceptable and tolerable, but any noise above that can affect our regular life. As per industrial standards, a level of 85dB is only accepted. Compared to air and water pollution, the harmful effects are less from noise. Noise may lead to increased stress, deafness, sleep disruptions and loss of concentration. Light pollution, like sound pollution also has many undesirable consequences. It is caused by electronic boards, vast lighting in play grounds, stadiums and malls and public lighting like street lights. Light pollution may result in severe pain in the eyes, loss of vision, increased stress and sleep disruptions'. In the same manner, animals are also affected by the pollution. The table below shows the effects of noise and light pollution in some Indian cities.

Table 3 Noise and Light pollution in India

S. No	Place	Noise and light pollution	Pollution Status	Pollution Index value	Noise and light Quality	Status
01	Agra	75.00	High	92.90	25.00	Low
02	Ahmadabad	65.83	High	72.85	34.17	Low
03	Bhopal	66.67	High	71.81	33.33	Low
04	Bhubaneswar	53.33	Moderate	58.48	46.67	Moderate
05	Chandigarh	61.90	High	57.60	38.10	Low
06	Chennai	57.53	Moderate	77.72	42.47	Moderate
07	Delhi	65.62	High	92.87	34.38	Low
08	Goa	47.92	Moderate	46.64	52.08	Moderate
09	Guntur	65.00	High	70.86	35.00	Low
10	Gwalior	57.14	Moderate	81.95	42.86	Moderate
11	Hyderabad	55.00	Moderate	82.57	45.00	Moderate
12	Jammu	50.00	Moderate	89.66	50.00	Moderate
13	Kochi	53.75	Moderate	66.58	46.25	Moderate
14	Mumbai	71.06	High	88.96	28.94	Low
15	Mysore	51.85	Moderate	59.06	48.15	Moderate
16	Nasik	60.53	High	56.19	39.47	Low

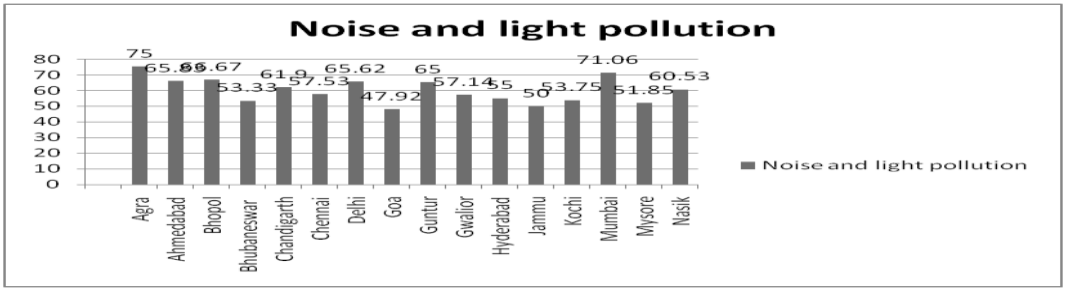

Fig 9. Place Vs Noise and Light pollution in India

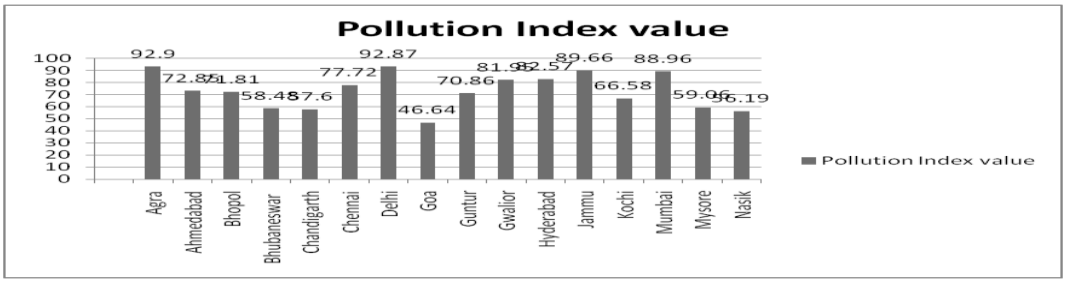

Fig 10 Place Vs Pollution Index Value

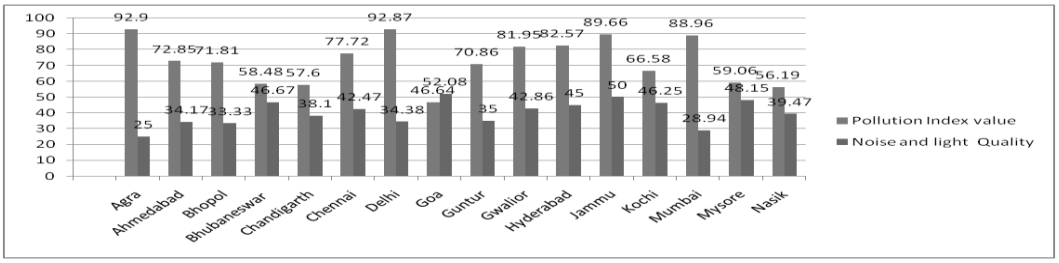

Fig 11 Pollution Index values Vs Quality level

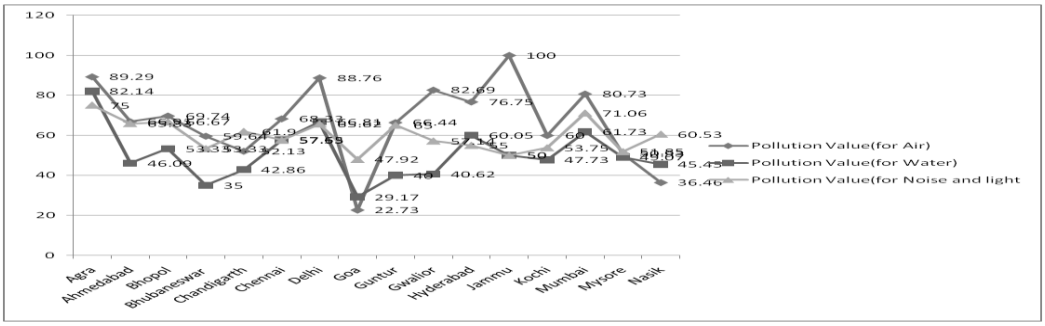

Fig 12 Comparison graph pollution value for air, water and noise and Light

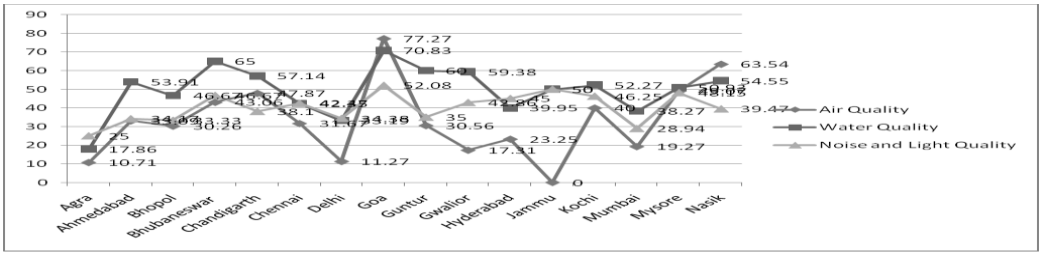

Fig 13 Comparison graph Purity value for air, water and noise and Light

CONCLUSION

Most of the Indian cites constantly ignore the rules gives by authorities and don't adhere to world quality standards for various pollutions. Pollution remains a challenging factor in India and other countries where there is high population growth. Various laws have been implemented in India to check or control pollution, but most of them remains ineffective. This imbalance gives various serious climate effects in the environment. It changes charter tics in air, water and land it changes the characteristics of air, water and land and produces many harmful effects in people. Thus, it is necessary to take necessary steps to reduce the level of pollution. It is necessary to take steps to reduce these pollutions.

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