

Environmental Pollution and Perception: Consequences of Air Pollution in Karur District, Tamilnadu

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Abstract

Our Planet faces a variety of troubling issues that stem from man-made contamination. Many of these leads to environmental problems. As time has passed however, scientists have discovered that population growth and rapacious conception of the planet's natural resources continue unabated, they would pose serious threats to the survival of our species, as well as to the survival of millions of others. The present study was designed to find out the sources, and to analyse the harmful effects of Air on the human health. The ecological air is dirtied due to the development of people and addition in number of vehicles and ventures. Polluted air adversely introduces the harmful effects on the health of living organisms. Air sullyng control is a critical factor for security of the human life and condition. In like manner, the present examination intends to separate the end and care about air pollution and control extents of the general populace in Karur locale.

Keywords: Air pollution, Control measures and Health problems.



1.Introduction

Environment in its wider sense includes everything which is external to human being. Environment may be defined as “an aggregate of all external conditions and influences affecting life development of an organism, human behavior and society”. The “creature of Universe” has created our earth with the most marvelous biodiversity. They have been blessed with a vast variety of resources for sustenance of the life. The bounties of the nature are enough for meeting the requirement of all living organisms occupying earth. The almighty Allah has appointed the human as his “Khalifa” on the globe so that the mankind may continue his

existence but also allows other flora and fauna to flourish, of course, maintaining certain desired level of natural resources. Thus, a delicate relationship exists among the three occupants of the mother earth i.e. humans, other living organisms and the natural resources. Nobody is permitted to misuse the protected gifts both in quality and quantity (Rehana, 2007). Environmental pollution means pollution of the environment due to release of any substance from any process which are capable of causing harm to man and other living organisms supported by environment (Hussain, 1998). Environmental pollution is “the contamination of the physical and biological components of the earth/atmosphere system to such an extent that normal environmental processes are adversely affected” (Kemp, 1998).

Air pollution is the introduction of chemicals, particulate matter, or biological materials that cause harm or discomfort to humans or other living organisms, or cause damage to the natural environment or built environment, into the atmosphere. The atmosphere is a complex dynamic natural gaseous system that is essential to support life on planet Earth. Stratospheric ozone depletion due to air pollution has long been recognized as a threat to human health as well as to the Earth's eco systems. Indoor air pollution and urban air quality are listed as two of the world's worst pollution problems in the 2008 Blacksmith Institute World's Worst Polluted Places report (Duflo, *et.al*, 2008).

Rapid industrialization, urbanization and mechanized transport are introducing new and disturbing elements into the environment. A variety of factories, chemical mills, machines are adding to environmental problem and vehicles as well as Industrial smoke are causing wide spread respiratory diseases and discomfort. The devastation caused by atomic radiation and fallout is too well known in this connection (Khan, 1992).

Polluted air adversely affects the health of human beings, animals, plants, soils, damage buildings and other property. There are five main classes of pollutants: carbon monoxide, hydrocarbons, nitrogen oxides, sulphur oxides and particulates. When the concentration of the pollutants in the air becomes very high, many people had difficulty of breathing and as a result few deaths may occur. Air pollution contributes the incidence of Bronchitis, emphysema and other respiratory diseases. Among children air pollution has been shown to be associated with the incidence of asthma, acute respiratory infections, allergies and other ailments (Colls, 2002). In metropolitan cities, widespread use of low quality fuel, combined with a dramatic expansion in the number of vehicles. On Pakistani roads, had led significant air pollution problems. Lead and Carbon emissions are major air pollutants in urban centers such as Karachi, Lahore, Faisalabad and Islamabad (ENN, 2002). In large cities, the emission from vehicles is another source of pollution. It is estimated that vehicles emit 25 times more the amount of Carbon Monoxide, 20 times the amount of hydrocarbons and 3.6 times the amount of nitrous oxide of an average vehicle in Pakistan as compared to United States (Jahangeer, 2000). The other sources of pollution are sewerage water, industrial wastes and disposal and controlling emissions from factories, particularly those located in residential areas, pollution of subsoil drinking water because of seepage of industrial effluents and sullage and inadequate solid waste disposal. A village near Lahore hundreds of cases of deformity of bones was found and it was due to contaminated drinking water (Dawn, 2002).

Every year 25 billion pounds of toxic pollutants are added to the environment by the factories and mills. Additionally, 22 billion pounds per year of pesticide (eight pounds per citizen) are sprayed on our crops. Certain pesticides that are illegal are also used in other countries on food. Annual world production of synthetic organic chemicals has grown exponentially since the early twentieth century. The majority of artificial chemical have never been screened for toxicity (Donohoe, 2003).

Since industrialization began, there has been 29 percent increase in atmospheric carbon dioxide, with current annual production reaching 6 to 8 billion tons. The top one fifth of the world's nations accounts for 63 percent of global CO₂ emissions, the lowest one fifth just two percent (Donohoe, 2003).

1.1 Sources of Air Pollution

There are natural and anthropogenic (human-made) causes of air pollution.

1.1.1 Natural Sources

Dust from natural sources, usually large areas of land with little or no vegetation. Methane, emitted by the digestion of food by animals, for example cattle. Radon gas from radioactive decay within the Earth's crust. Radon is a colorless, odorless, naturally occurring, radioactive noble gas that is formed from the decay of radium. It is considered to be a health hazard. Radon gas from natural sources can accumulate in buildings, especially in confined areas such as the basement and it is the second most frequent cause of lung cancer, after cigarette smoking. Smoke and carbon monoxide from wildfires. Volcanic activity, which produce sulfur, chlorine, and ash particulates (EPA, 2010).

1.1.2 Human sources

It is however the “*anthropogenic causes*” that we are mostly interested in, as they no doubt play the most important role in polluting the Earth's atmosphere. "Mobile Sources" include motor vehicles, marine vessels, aircraft and the effect of sound etc. Chemicals, dust and controlled burn practices in agriculture and forestry management. Controlled or prescribed burning is a technique sometimes used in forest management, farming, prairie restoration or greenhouse gas abatement. Fumes from paint, hair spray, varnish, aerosol sprays and other solvents (EPA, 2010).

Fossil fuels (oil, gas & coal) are the largest anthropogenic sources of air pollution – they are widely used in industry and everyday life. *Population growth* causes the demand for food and other goods to go up, which is met by expanded production and use of natural resources. This then leads to higher levels of atmospheric pollution. *Globalization* has in a way become a facilitator of air pollution. Big industry takes advantage of lax environmental controls in developing nations and moves its manufacturing facilities to such “pollution havens” from where air pollution travels around the world without any obstacles (Ehrlich *et al.*, 1977).

1.2 Universe of the Study

Karur is the head quarter of Karur taluk and region. It is situated on the bank of stream Amaravathi. During the most recent three decades the town developed as a significant material focuses with in excess of 1000 power loom and handloom units delivering blankets, towels and goods. The primary crude material is cotton yarn. This cotton yarn and the completed item (i.e) dim fabric are dyed any colored by the enterprises situated in this town. (Rajamanickam and Nagan 2010). The significant issues in the town are the continuous mishaps in the street and make on Noise. Along these lines an investigation has been made to think about the assessment of the people groups towards air contamination and control measures.

2.Methodology

The present examination depends on the conclusion of the respondents about air pollution and control. Both essential and optional information were gathered for the present investigation. The essential information are gathered from different classifications of respondents, about air contamination and control. Auxiliary information was gathered from the records of Municipal Corporation, Journals, magazine and sites. For the present investigation judgment inspecting technique was embraced in an efficient manner to gather information from 100 respondents. The objectives are,

- ✓ To study the impact of air pollution regarding the health of people
- ✓ To analyze respondent's knowledge about government initiatives regarding air pollution and control

- ✓ To study air pollution due to vehicle and industries in Karur and
- ✓ To suggest air pollution control measures

The statistical tool used for data analysis was percent change. The data relating to opinions on air pollution and control measures were collected for the period of months from January 2019 to June 2019.

3. Results

3.1 Classification based on gender

Table 1 shows the gender wise classification of the respondents.

Table 1
Gender of the respondents

S. No.	Gender	No. of respondents	Percentage (%)
1.	Male	50	50
2.	Female	50	50
Total		100	100

Source: Primary data

From the above table 1, it is observed that among 100 respondents 50 % (50) of the respondents were male and remaining 50 % (50) of the respondents were female.

3.2 Classification based on age

Table 2: Age of the respondents

Table 2
Respondents according to their age

S. No.	Age (in years)	No. of respondents	Percentage (%)
1.	Below 20	34	34
2.	20 to 30	39	39
3.	30 to 40	17	17
4.	Above 40	10	10
Total		100	100

Source: Primary data

Table 2, shows that among 100 respondents 34% (34) of the respondents are in age group of below 20 years, 39 % (39) of the respondents come under age group between 20 and 30 years, 17 % (17) of the respondent come under the age group of 30 to 40 years and 10 % (10) of the respondents are above 40 years.

It is observed from the study that most (39 %) of the respondents are in the age group between 20 and 30 years.

3.3 Classification based on literate status

The researcher ascertains the respondents based on their literate status.

Table 3
Literate status

S. No.	Status	No. of respondents	Percentage (%)
1.	Literate	78	78
2.	Illiterate	22	22
Total		100	100

Source: Primary data

From the above table 3, it is evident that among 100 respondents 78 % (78) respondents are literate and the remaining 22 % (22) of the respondents are illiterate.

It is known from the analysis that majority (78%) of the respondents are literate.

3.4 Classification based on employment

A detailed analysis has been made to know the occupation of the respondent

Table 4
Employment status of the respondents

S.No	Employment status	No. of respondents	Percentage (%)
1.	Agriculture	14	14
2.	Business	10	10
3.	Government employee	22	22
4.	Private employee	27	27
5.	Coolie	16	16
6.	House wife	11	11
Total		100	100

Source: Primary data

From the above table 4 it is known that among 100 respondents 27 % (27) of the respondents are private employees, 22 % (22) of the respondents are government employees, 16 % (16) of the respondents are coolies, 14 % (14) of the respondents are agriculturists, 11 % (11) of the respondents are house wives and 10 % (10) of the respondents are business men.

The study revealed that the majority (27 %) of the respondents are private employees.

3.5 Classification based on clean area

The researcher has made further analysis whether the surrounding areas of the respondents are clean or not.

Table 5
Clean area of the respondents

S. No.	Clean area	No. of respondents	Percentage (%)
1.	Clean area	60	60
2.	Polluted area	40	40
Total		100	100

Source: Primary data

From the above table 5, it is evident that among 100 respondents, 60 % (60) respondents live in clean area and the remaining 40 % (40) of the respondents live in polluted area.

It is known from the analysis that majority (60%) of the respondents live in clean areas.

3.6 Classification based on respondents' awareness of air pollution and control

Table 6 shows the awareness of respondents about air pollution.

Table 6
Awareness about air pollution and control

S. No.	Awareness	No. of respondents	Percentage (%)
1.	Aware	79	79
2.	Unaware	21	21
Total		100	100

Source: Primary data

From the above table 6, it is evident that among 100 respondents, 79 % (79) respondents are aware about air pollution and control, the remaining 21 % (21) of the respondents are unaware of the pollution and control.

It is known from the analysis that majority (79%) of the respondents are aware of the air pollution and control.

3.7 Usage of motor vehicle

Table 7 shows the usage of motor vehicle by the respondents.

Table 7
Motor vehicle of the respondents

S. No.	Motor vehicle	No. of respondents	Percentage (%)
1.	Have	84	83.3
2.	Do not have	16	16.7
Total		100	100

Source: Primary data

From the above table 7, it is evident that among 100 respondents, 84 % (84) respondents use motor vehicle and the remaining 16% (16) of the respondents do not use motor Vehicle.

It is known from the analysis that majority (84%) of the respondents use motor vehicle.

3.8 Type of disease caused by air pollution

Table 8 depicts opinion of respondents about the type of disease caused by air pollution.

Table 8
Type of disease caused by air pollution

S. No.	Type of disease	No. of respondents	Percentage (%)
1.	Wheezing	31	31
2.	Cough	12	12
3.	Asthma	10	10
4.	lung disease	6	6
5.	Eye disease	21	21
6.	No disease	20	20
Total		100	100

Source: Primary data

It is apparent from the table 8, out of 100 respondents 31 % (31) of the respondents are affected by wheezing, 12 % (12) of the respondents are affected by cough, 10 % (10) of the respondents are affected by asthma, 6 % (6) of the respondents are affected by lung disease and 21% (21) of the respondents are affected in the eyes and 20 % (20) of the respondents have no disease in the study area.

It is found by the study that most (31 %) of the respondents are Wheezing affected.

3.9 Location of respondents

The researcher has further analyzed the respondents' location.

Table 9
Location of Respondents

S.No.	Area	No. of respondents	Percentage (%)
1.	Industrial area	62	62
2.	Non Industrial area	38	38

Total	100	100
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Source: Primary data

From the above table 9, it is evident that among 100 respondents, 62% (62) respondents are living in industrial areas and the remaining 38% (38) of the respondents are in non Industrial area.

It is known from the analysis that majority (62%) of the respondents live in Industrial area.

3.10 Public involvement in air pollution control

Table 10 shows level of public involvement in air pollution control.

Table 10

Public involvement of air pollution control

S. No.	Public involvement	No. of respondents	Percentage (%)
1.	Dissatisfied	46	46
2.	Satisfied	54	54
Total		100	100

From the above table 10, it is evident that among 100 respondents, 54 % (54) respondents are satisfied with public involvement in air pollution control and remaining 46 % (46) respondents are dissatisfied with public involvement in air pollution control.

It is known from the analysis that majority (54%) of the respondents are satisfied with public involvement in air pollution control.

3.11 Satisfaction level of the respondents about the Government involvement in air pollution control

Table 11 analyses the satisfaction level of the respondents about government involvement in air pollution control.

Table 11

Respondents' satisfaction towards Government involvement in air pollution control

S. No.	Satisfaction towards Government involvement	No. of respondents	Percentage (%)
1.	Satisfied	44	44
2.	Dissatisfied	56	56
Total		100	100

Source: Primary data

It is inferred from the above table, out of 100 respondents, 56 % (56) are dissatisfied with Government involvement and remaining 44% (44) respondents are satisfied with Government involvement.

It is inferred from the analysis that majority (56%) of the respondents are dissatisfied with Government involvement.

3.12 Sources of air pollution

Table 12 shows the sources of air pollution that mostly affects the air.

Table 12

Sources of air pollution

S.No	Sources of air pollution	No. of respondents	Percentage (%)
1.	Public smoking	24	24

2.	Vehicle strength	46	46
3.	Industrial units	26	26
4.	Gas usage	4	4
Total		100	100

Source: Primary data

It is inferred from table 12, out of 100 respondents, 46 % (46) respondents opined that vehicles strength is the major cause. 26 % (26) respondents said that industrial units, 24% (24) respondents are for public smoking and 4 % (4) respondents are for gas usage air.

It is found that most (46 %) of the respondents said that vehicle strength is the major cause for air pollution.

3.13 Effects of air pollution

Table 13 shows the sectors that air pollution mostly affects.

Table 13
Causes of air pollution

S. No.	Causes of air pollution	No. of respondents	Percentage (%)
1.	Affect the animals	6	6
2.	Affect the human beings	36	36
3.	Causes cancer	8	8
4.	Affect the ozone layer	43	43
5.	Other problem	7	7
Total		100	100

Source: Primary data

From the above table 13, it is understood that, 43 % (43) respondents said that due to air pollution ozone layer is affected, 36 % (36) respondents said that human beings are affected, 8 % (8) respondents said that air pollution cause cancer, 7 % (7) respondents said that air pollution causes other problems and 6% (6) respondents affects the animals.

It is known from the analysis that majority (43%) of the respondents opined that air pollution affects ozone layer.

3.14 Purpose of air pollution control

Table 14 has analyzed the need for air pollution control.

Table 14
Purpose of air pollution control

S.No.	Purpose of air pollution control	No. of respondents	Percentage (%)
1.	Save the human life	44	44
2.	Save the ozone layer	26	26
3.	Save the agriculture	7	7
4.	Save the oxygen	23	23
Total		100	100

Source: Primary data

From the above table 14, it is evident that among 100 respondents', 44 % (44) respondents opined that air pollution control saves human life, 26 % (26) respondents for the ozone layer and the oxygen and 7 % (7) respondents saves agriculture.

It is known from the analysis that most (44%) of the respondents are for saving human life.

4. Suggestions

In the wake of having made a cautious assessment, the going with proposition were made to improve the care about air defilement control.

1. Use open vehicle even more routinely, to save essentialness and less sully.
2. Walk when we go to a contiguous spot.
3. Water your plants during the night or in all regards early, so the sun will set aside more effort to scatter the water.
4. Reduce, reuse and reuse materials instead of hurling them like trash.
5. Avoid obtaining nonessential things and non-biodegradable plastics.
6. Do not hurl squander in the city, forests and stops.
7. Do not annihilate the green territories of the city.
8. Grow more trees.

5. Conclusion

Karur is one of the outstanding modern urban communities in India. Air contamination is caused due to over populace, enterprises and vehicles in Karur. Along these lines, this present investigation makes mindfulness among the individuals towards air pollution and control measures.

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