International Journal of Advance and Applied Research
www.ijaar.co.in
ISSN – 2347-7075 Impact Factor – 7.328
Peer Reviewed Bi-Monthly
Vol.9 No.5 May – June 2022

THE IMPACT OF AIR POLLUTION ON HUMAN HEALTH

Dr. Parvathi Pati
Department of Chemistry, Smt V.G Women's Degree College, Kalaburagi-585106, India
Corresponding Author - Dr. Parvathi Pati
Email:phbandoji10@gmail.com

Abstract

The presence of impurities in an atmosphere that affect nature of the environment including human health are known as air pollution, it decrease the life quality or interfere with the normal activities of life. Air pollution means any gaseous substance micro substances of solid, liquid vapours which present in the atmosphere concentration that may lead to injurious to the living creatures like human's or other living creatures like environment or a property in general. Air pollution has been intensified by development that typically occurs as countries become industrialized, rising cities, increasing traffic, industrialization, and rapid economic development, and higher levels of energy consumption. The air pollution is widespread in urban areas where vehicles are the major contributors and in a few other areas with a high concentration of industries and thermal power plants. Major air pollution occurs from big scale industries like, steel plants, power plants, cement plants, including crushers and smelters plants. Smaller sources are cars, buses, planes, trucks, cars, buses and trains. Anthropogenic activities and naturally occurring sources such as windblown dust and volcanic epidemics

Keywords: *environment, impacts, pollution source control measures.*

Introduction

"" prevention from pollution is a major global concern because of the injurious effects of pollution on a person's fitness and environment. Environmental pollution rises in various forms, such as like air pollution, , soil pollution, water pollution etc... Air pollution may be defined as the presence of one or more contaminants like dust, mist, and colour , smoke in the atmosphere that are injurious to human beings, plants and animals. These arise both from human activity and ordinary progressions human activity. Substances not naturally found in the air or at greater fascinations are in different locations from usual are mentioned to as 'pollutants'. Individual reactions to air pollutants depend on the type of pollutant a person is showing to, the degree of contact, the individual's health status and heredities. On hot, cloudy days increase their contact to pollutants in the air. With increasing the use of motorized transport is also expected to continue increase in the coming years, hypothetically deteriorating air quality. Poor air quality in turn has been exposed to have seriously adverse effects on public health.

Objectives: to evaluate the root cause for air pollution,

1. To evaluate the impact of air quality on the fitness of people,
2. To determine the essential of action to control the air pollution sources
3. Need of rising consciousness nationwide for prevention, control or reduction of environmental pollution

effect of air pollution

The effect of air pollution includes breathing (respiratory system) problems, aggravation of existing respiratory and cardiovascular disease, and alteration in body defense systems against foreign materials, damage to lung tissue, carcinogenesis and premature death. A report from world health organization stats that 4.6 million people died every year due to direct causes attributable to air pollution. Direct causes of air pollution related deaths include aggravated asthma, bronchitis, lung and heart diseases, , emphysema and respiratory allergies including stress plant more trees "plant a tree = plant a life "in bhopal civilian pollution crisis in india. Industrial vapours leaked from the union carbide factory, belonging to union carbide, inc., u.s.a., killed more than 2,000 people outright and injured 600,000 people, some 6,000 of whom would later died from their injuries".

Study procedure

A detailed study of the official websites of the government institutions has been taken for analyzing an ambient air quality which is executing a nation-wide national air quality

monitoring programme. The network consist of 332 operating stations covering 121 cities/towns in 25 states and 4 union territories of the country.
I) national ambient air quality monitoring programme
Ii) tamilnadu pollution control board (state level agency)
Hypothetical advantage work for assessment & practices of air quality
The objectives of the namp are to determine status and developments of ambient air quality, to establish whether the prescribed ambient air quality standards are desecrated, to identify non realization cities, to obtain the information and accepting necessary for developing preventive and remedial measures, to understand the natural cleaning process undergoing in the environment through pollution reduction, diffusion, wind based movement, dehydrated deposition, precipitation and chemical conversion of pollutants generated. The composition of gases present in air co2is 0.037% ,oxygen 21% , nitrogen 78%, . . The air quality quality of different cities/towns has been categorized into four categories based on an exceedence factor .

the four air quality categories are:

high pollution when the e. Factor between 1.0 - 1.5 ug/m^3

critical pollution when e. Factor is more than 1.5,ug/$m^{3,}$

,low pollution when the e.factor is less than 0.5 ug/$m^{3,}$

mo derate pollution when the e.factor is between 0.5 - 1.0 ug/ m^3

Pollutants can be classified

1. Primary pollutants are substances directly produced by a process, like ash from a volcanic explosion or the co gas from a motor vehicle exhaust.
2. Secondary pollutants they are form in the air when primary pollutants react or interact. An example of a secondary pollutant is ground level ozone - one of the many secondary pollutants that make up photochemical smog.

Primary pollutants formed by human

1. Chlorofluorocarbons
2. Organic compounds, fuel vapours and solvents
3. Oxides of sulfur, nitrogen and carbon
4. Organic compounds, fuel vapours and solvents
5. Harmful air pollutants
6. Metal oxides, like lead, copper cadmium,and iron
7. Particulate matter, like smoke and dust
8. Tenacious organic pollutants
9. Pongs

Secondary pollutants include some particles formed from gaseous primary pollutants and compounds in photochemical smog, like no, ground level ozone and peroxyacetyl nitrate .

Impact of air pollution on health

Some of the gases can extremely and unpleasantly affect the health of the peoples and should be given due care by the restless consultant. The under mentioned gases are mainly outdoor air pollutants but some of them can and do occur interior depending on the conditions of the sources.

*.oxides of n***.** This gas can make teenagers disposed to breathing diseases in the winters

*Biological pollutants***.** These are mostly allergens that can cause asthma, hay fever, and other allergic diseases.

*Volatile organic compounds***.** Volatile compounds can cause frustration of the eye, and throat, nose. In severe cases there may be nausea, headaches, and loss of coordination. In the longer run, some of them are alleged to reason injury to the liver and other shares of the body.

*Hcho***.** Exposure causes irritation to the, nose and eyes may cause antipathies in some people. *Pb***.** Pb can cause damage to the nervous system, and digestive problems , in some cases reason cancer. It is particularly destructive to small children.

*Rn***.** A radioactive gas that can accumulate inside the house, it originates from the soil and rocks under the house and its level is conquered by the outdoor air and also to some level the other gases being produced indoors. Consociate to this gas rises the danger of lung cancer.

*O_3***.** Exposure to this gas varieties our eyes burn itch, burn and it has also been associated with increase in respiratory disorders such as asthma. It lowers our resistance to colds and pneumonia.

*Co***.** Co combines with hemoglobin to less the amount of oxygen that enters our blood through our lungs. The compulsory with other heme proteins reasons changes in the function of the affected organs in the cardiovascular system brain and brain , and also the emerging fetus. It can impair our concentration, slow our reactions, and make us disordered and sleepy.

*So_2***.** So_2 in the air is produced due to the rise in scorching of fossil fuels. It can oxidize and form h_2so_4 mist. So_2 in the air leads to illnesses of the lung and other lung infections such as gasping and littleness of inhalation. Long-term things are more challenging to ascertain as so_2 contact is often combined with that of *deferred particulate substance* .

*Tobacco smoke***.** Tobacco smoke produces a extensive range of harmful substances and is a major reason for health illness, which known to cause for cancer, not only to the smoker it will touch inactive smokers too. It is well-known that boiling affects the inactive smoker unpredictable from boiling realization in the eyes or nose, and throat preclusion, to cancer, bronchitis, natural asthma, and a reduction in lung function

Suspended particulate **material .** Suspended material consists of dust, , mist, fumes, and smoke. The main chemical component of *suspended particulate* material that is of major concern is pb, , as, ni, and those present in diesel exhaust. These particles when breathed in, cabin in our lung tissues and cause respiratory malfunctions and lung injury .

Suspended particulate material as a major pollutant needs importance as

1. More epidemiological proposition has been calm on the contact to this than any other pollutant.
2. It moves additional persons generally than any other contamination on a ongoing basis.
3. There is extra noticing data available on this than any other contaminant

Air pollution

Plantation.

More and more trees must be recognized everywhere. Environmental protection needs to be measured as an substantial field for industrial and other emerging activities in india. The green belt separate differs from republic and region. The common impartial is to defend normal environments like biodiversity etc, to development air quality of the region, pollution control has to registration micro climate of the region,

Sources of energy.

Alternative energy is any energy source that is an alternative to (coal) relic fuel. Such alternative energy sources are essentially a renewable energy, such energy source are…biomass plants with advanced, hydro-electric, fuel cells, win Geothermal, solar, solar thermal.

Vehicles.

An different fuel for vehicle is that a vehicle runs on a fuel other than traditional petroleum fuels

1. Electric vehicles
2. Biodiesel
3. Compressed natural gas
4. Cng and lpg conversions
5. Ethanol - flexible fuel vehicles
6. Hydrogen & fuel cell cars
7. Neighborhood electric vehicles
8. Liquefied natural gas
9. Liquefied petroleum gas and propane

Different forms of power attention on evolving fuel cells, different forms of combustion, and even the dropped energy of compressed air like electric hybrid electric vehicles, car, , solar powered

Industries.

In order to reservation the city's atmosphere and pollution free environment in important and important areas contaminating industries should be effectual to suitable limit of pollution or it must be preeminent from populated areas to industrial areas.

Traffic areas.

Some roads should be earmarked exclusively for automobile traffic. On the other hand, overfilled roads and lanes should be approved as automobile traffic control area. Heavy circulation location needs to be analyzed and smoke viewer must be connected to avoid pollution.

Different mode of transport

For local purposes, the use of cycles should be encouraged. **In china**

Electric trains.

Electric trains may also be helpful for commuters from suburban areas. It will help to control air pollution in urban areas and to evade traffic.

pollu tion check of vehicles.

Immediate action need from government for a ban on old vehicles after 10 years. Pollution test of vehicles should be checked seriously on regular basis.

environmental impact assessment.

Environmental impact valuation should be approved out regularly to recognize and damaging impacts of industries on environment evaluate and the potential

Strict action:

Government should take strict action against those industries which discharge higher quality of pollutants than the level prescribed by the state pollution control board.

Conclusion

Life begins at breath, without breathing . We can't live, life runs on breathing. The (oxygen) air we breathe sustains us. So, let us make everyday a good day for everyone. Need a help from all to regulator pollution. As there is the need for unceasingly instruct and educate the public about the sources and an consequence on air pollution, which makes us to comprehend the dangers and health risks of living in contaminated environment.

Always "prevention is better than cure" we must help to fight global warming the following steps…

1. Avoid burning plastics. “no to plastic” … maintain “plastic free zone”
2. Plant more trees “plant a tree = planta life”. Doesn’t waste water “save water savelife
3. Plant more trees “plant a tree= plant a life doesn’t waste water “savewater save life

References:-

1. Keleş n. Ilicali o. C. Değer k. 1999impact of air pollution on prevalence of rhinitis in istanbul. Arch environ health; 54 (1), 48 51
2. Kilburn k. H. 1992pulmonary responses to gases and particles. Last, j.m., wallace, r.b., eds., public health and preventive medicine. Appleton & lange, division of prentice hall, 463 477
3. Lester b. Eugene p. S. 1970air pollution and human health the quantitative effect,with an estimate of the dolar benefit of pollution abatement, is considered, science,3947 723 733
4. Lipfert,f.w.,wyzga,r.e. 1995air pollution and mortality:issues and uncertainties, journal of air and waste management association 45 949 966
5. Olgun ç. 1996hava kirliliğinin 02yaş grubunda solunum sistemi enfeksiyonlarinda mortalite ve morbidite yönünden etkisi (thesis), sağlik bakanliği şişli etfal hastanesi, istanbul/turkey.
6. Özden,ö.,yay,d.o.,altuğ,h.,gaga,e.,demirel,g., döğeroğlu,t.,örnektekin,s.,meliefste,k.&door n,w. 2008hava kirliliği ve kontrolü sempozyumu, bildiriler kitabi, 631 642hatay/turkey
7. Özer u. Aydin r. Akçay h. 1997air pollution profile of turkey. Chemistry international, 19 (6), 190 191
8. Öztürk m. 2005ehir içi bölgelerde hava kirliliğinin sağlik üzerine etkileri, çevre ve orman bakanliği, ankara/turkey.
9. Özer u. Aydin r. Akçay h. 1997air pollution profile of turkey, chemistry international, 19 6 190 191
10. Sloss l. L. Smith i. M. 2000pm_{10} and $pm_{2.5}$: an international perspective, fuel processing technology, 65-66,127 141
11. Sardar s. B. Geller m. D. Sioutas c. Solomon p. A. 2006development and evaluation of a high-volume dichotomous sampler for chemical speciation of coarse and fine particles, aerosol science, 37, 1455 1466
12. Şahin ü. (2000). Istanbul’da 1994-1998 hava kirliliği düzeyleri ile mortalite arasindaki ilişki (thesis) istanbul üniversitesi tip fakültesi
13. Topbaş, m. Can, g.& kapucu, m. (2004). Effects of local decisions on air pollution in trabzon, turkey during 1994-2000. Turkish journal of public health, 2 (2), local directorate of environment and forestry of trabzon80 84
14. Uzunali, d. (2004).air pollution maps based on the data collected between 1998 and 2002 for the center of trabzon city. M. Sc. Thesis, department of mechanical engineering, karadeniz technical university
15. Ünsal a. Metintaş s. Inan o. Ç. 1999eskişehir’de hava kirliliği ve bazi hastaliklar nedeniyle acil başvularinin incelenmesi, tüberküloz ve toraks, 47(4),449 455
16. Url-1.air quality and health http://www.agius.com/hew/resource/airqual.htm
17. Url-2 air quality and healthhttp://www.who.int/mediacentre/factsheets/fs313/en/index.html, 2008
18. Url-3 the effects of air pollution on human health by charlotte mission, how contributor http://www.ehow.com/about_5397380_effects-air-pollution-human-health.html
19. Url-4indoor & outdoor air pollution, http://www.lbl.gov/education/elsi/pollution-main.html,2010
20. Url5 devlet meteoroloji müdürlüğü, http://www.meteor.gov.tr/2006/tahmin/tahminiller aspx?m=trabzon, 2009
21. Url-6 gezi yerleri, trabzon’un iklim verileri (2007),http://www.geziyerleri.net/gezi/10-trabzonun-iklimverileri html, 2009 url 7 coğrafya dünyasi, trabzon iklim ve bitki örtüsü,http://www.cografya.gen.tr/tr/trabzon/iklim.html, 2009
22. Url 8 world health organization, air quality guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide, summary of risk assessment (2006), http://www.whqlibdoc.who.int/hq/2006/who_sde_phe_oeh_0 6.02_eng.pdf-, 2009
23. 39. Url 9 uçku, r., karababa, a. O., ergör, a., sarikaya, ö., civaner, m., demiral, y.,2000hava kirliliği, türk tabipleri birliği yatağan’da hava kirliliğinin değerlendirilmesi raporu http://www.ttb.org.tr/eweb/yatagan/icin.html
24. 40. Url10 kalkan, o.2001hava kirliliği, http://www.bsm.gov.tr/makale/20013.asp?donem=mart%202001&sayi=20013#03
25. 41. Url 11 health aspects of air pollution with particulate matter, ozone and nitrogen dioxide,2003report on a who working group.bonn/germany(this document was text processed in health documentation services who regional office for europe, copenhage)

http://www.euro.who.int/__data/assets/pdf_file/0005/112199/e79097.pdf
26. R.ravinder, p.thilagaraj.r.kesavan a study on air pollution and its impact on human health in chennai city
27. R.ravinder, p.thilagaraj.r.kesavan a study on air pollution and its impact on human health in chennai city