Impact of Air pollution on Human Health

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Abstract:

Air pollution risk is a function of the hazard of the pollution and the exposure to that pollution Its can be expressed for an individual for certain groups neighbourhoods or children living in a country, or for entire population. The exposure to hazards air pollution for a geographical area which includes the various micro-environments and age groups. It needs different age and other demographic groups, especially infants, children, pregnant women and other sensitive Sub population. Air pollution is harmful material into the earth's atmosphere, causing disease, death to humans, and damage to other living organisms such as food crops and built environment. The sources of air pollution are automobiles, industrial emissions, nuclear and thermal power stations etc. Its effects on human health, and control of air pollution.

Keywords:- Sources , effects on human health & control of air pollution,

Introduction:

Air is a mixture of various gases .air is colourless, odourless and tasteless. The composition of air consists of nitrogen, oxygen, carbon dioxide, water vapour dust and smoke etc. Atmosphere is the blanket of air around the earth and is made up of five layers Troposphere, Stratosphere, Mesosphere, Thermosphere, and Exosphere. Air supports life because living organisms require oxygen for their survival. The oxygen reacts chemically with the digested food within the bodies of living organisms to produce carbon dioxide gas, water vapour and energy. The air pollution is the introduction of chemical, particles or other materials that cause discomfort, disease or even death of living beings, into the atmosphere. The atmosphere is a complex 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 ecosystem. Indoor air pollution Airlog and urban air quality are listed as two of the world's worst toxic problem in the 2008 Blacksmith Institute World's worst polluted place report. Air Pollution exposure can be expressed for an individual for certain group that is neighbourhoods or children living in a country, or for entire population. For example one may want to calculate the exposure to hazardous air pollution for a geographic area. The exposure needs s to include different age and other demographic group, especially infants, children, pregment women and other sensitive subpopulations. The exposure to an air pollution must integrate the concentrations of the air pollution in particular activities playing, cocking, working ,etc. for example a small Childs inhalation rare will be less than that of an adult. The air pollution concentration in each micro activity and micro environmental setting is summed to indicate the exposure. The constitutional provisions are backed by a number of law , Act, Rules, and Notifications. The EPA Act1986 came into force soon after the Bhopal gas Tragedy and is considered an umbrella legislation as it fill

many gaps in the existing laws. There after a large number of laws came into existence as the problem began arising for example, Handling and Management of hazardous waste Rules in 1989.

Research Methodology:

Very simple methodology is used in this paper, hence in this paper we try to Highlight the main Impact of Air pollution on Human Being. In this paper used secondary data Sources of air pollution, effects on human health & control of air pollution.

Sources of air pollution:-

Some of these direct products further react within the atmosphere and produce additional indirect products. Air pollution result from gaseous emission from mainly Industry, Automobiles, and Thermal power stations domestic, combustion, van, trucks, planes and other vehicles emit carbon monoxide a poisonous gas, through their exhaust system. Burning of coal and industrial waste products sulphur dioxide gas. Such gases spread in the air create an imbalance in the natural composition of air and make it impure.

The increasing vehicular traffic density has posed a continues threat to the ambient air quality. There are over300 million cares, and other vans .India which is likely to have over 30 million vehicles have more than 65% two wheelers operating on petrol. In all the major cities of the country about 800 to 1000 tonnes of pollutants air daily, of which 50% come from automobile exhausts.

Petroleum refineries are the major source of gaseous pollutants. Its release SO2 and NOx. The fertilizer industries release oxide of nitrogen and dust particles of microscopic size. Dust particle may be evolved from the process of drying, burning, grinding, screening, mixing and packaging. Cement dust is common air pollution, which is potential health hazard. Chemically is a mixture of oxide of aluminium, silica, potassium, calcium and sodium. Stone crushers and hot mix plants also create a menace. Many chemical manufacturing industries emit acid vapours in air.

The National Thermal Power Corporation has setup mammoth coal- powered power station to augment the energy generation of our country. Radioactive emissions many penetrate through biological tissues in a manner analogues to tiny bullets. The coal consumption of thermal plants is several million tonnes. The chief pollutants are fly ash, SO, and other gases hydrocarbons.

Effect of air pollution:

Air pollution can causes short term and long term effects on human health.

Short term effects are as Irritation of eyes, nose, mouth and throat. Headaches, nausea and allergy .Respiratory infection such as bronchitis, Pneumonia, Asthma attack, Reduced lung functioning.

Long term effects are as Chronic pulmonary diseases, Lung cancer, Cardio- Vascular disease premature death.

Air pollution is the major causes for acid rain and global warming. The harmful gases present in polluted air causes burning of eyes. Pollution also damage crops and sometimes even causes accidents due to formation of smog.

The hydrocarbons have carcinogenic effect on lung. The PAN and ozone Photochemical smog which cause irritation of eye, nose and throat and respiratory distress.

The particular matter is injurious to health soot, lead particles form exhaust assents, fly ash, volcanic emission pesticides H2 SO4, mist metallic dust cotton and cement dust etc. When inhalant by man causes respiratory diseases such as tuberculosis and cancer.

Inhaled Co combines with blood haemoglobin to form carboxyhemoglobin about 210 times faster than O, dose. Formation of carboxyhemoglobin decreases the overall O, carrying capacity of blood to cell resulting into oxygen deficiency hypoxia. At about 200 ppm concentration for 6-8 hours, headache begins, and mental activity gets reduced above 300 ppm throbbing headache starts by vomiting and collapse at 500 ppm , man reaches into coma and at 1000 ppm, death occurs.

At a low concentration H,S causes headache, nausea, collapse coma and finally death. Unpleasant odour may destroy the appetite at 5 ppm level in some people. A concentration of 250 ppm may causes conjunctivitis and irritation of mucus membranes. Exposure at 500 ppm for 15-30 minutes may cause colic diarrheal and bronchial pneumonia. This gas readily passes through alveolar membrane of the lung and penetrates the blood stream. Death occurs due to respiratory failures.

Control of air pollution:-

It can control by cutting the pollutants emission from vehicular exhaust, control of evaporation from fuel tank and carbonator, uses of filter and use of unleaded petrol.

Tree plantation, using mass transport system and use of less polluting fuels may also help in the control and reduction of air pollution.

Solar energy is useful which does not release any pollutants in the atmosphere. Incinerators, settling chamber and electrostatics are use, they removal of various pollutants. The air pollution is also controlled by using the process of absorption. In this process the gases are passed through absorbers containing liquid absorbent which remove or modify one or more gases which are responsible for the air pollution. Removal gases pollutants by the process of absorption. In this process disposal of gaseous pollutants is facilitated by concentrating them on the adsorbents. Using low sulphur coal in industries. Sulphurs can also be removed from the coal by washing it.

The air (Prevention and control of pollution) **Act, 1981** provides for the control and abatement of air pollution. It entrusts the power of enforcing this act to the CPCB.

The air (Prevention and control of pollution) **Act, 1987** Amendment act empowers the central and state pollution board to meet with grave emergencies of air pollution.

The Motor Vehicles **Act, 1988** state that all hazardous waste is to be properly packaged, labelled and transported .Directive Principles of State Policy as well as the Fundamental Rights. The Department of Environment was established in India in1980 to ensure a healthy environment for the country. These later become the ministry of Environment and Forests in 1985.

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