Air pollution essay 24

Environment, Pollution

What are the effects and sources ofair pollutionAssignment III Rachita Mittal Western International University SCI 270 Mrs. Saudamani Sharma Introduction Airpollutionis the introduction of chemicals, particulate matter, or biological materials that cause harm or discomfort to humans or other living organisms, or damages the naturalenvironment, 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 humanhealthas well as to the Earth's ecosystems.

History Humans probably first experienced harm from air pollution when they built fires in poorly ventilated caves. Since then we have gone on to pollute more of the earth's surface. Until recently, environmental pollution problems have been local and minor because of the Earth's own ability to absorb and purify minor quantities of pollutants. The industrialization of society, the introduction of motorized vehicles, and the explosion of the population, are factors contributing toward the growing air pollution problem. At this time it is urgent that we find methods to clean up the air.

The primary air pollutants found in most urban areas are carbon monoxide, nitrogen oxides, sulfur oxides, hydrocarbons, and particulate matter (both solid and liquid). These pollutants are dispersed throughout the world's atmosphere in concentrations high enough to gradually cause serious health problems. Serious health problems can occur quickly when air pollutants are concentrated, such as when massive injections of sulfur dioxide and suspended particulate matter are emitted by a large volcanic eruption. Air Pollution in the Home

You cannot escape air pollution, not even in your own home. " In 1985 the Environmental Protection Agency (EPA) reported that toxic chemicals found in the air of almost every American home are three times more likely to cause some type of cancer than outdoor air pollutants". (Miller 488) The health problems in these buildings are called " sick building syndrome". " An estimated one-fifth to one-third of all U. S. buildings are now considered " sick". (Miller 489) The EPA has found that the air in some office buildings is 100 times more polluted than the air outside.

Poor ventilation causes about half of the indoor air pollution problems. The rest come from specific sources such as copying machines, electrical and telephone cables, mold and microbe-harboring air conditioning systems and ducts, cleaning fluids, cigarette smoke, carpet, latex caulk and paint, vinyl molding, linoleum tile, and building materials and furniture that emit air pollutants such as formaldehyde. A major indoor air pollutant is radon-222, a colorless, odorless, tasteless, naturally occurring radioactive gas produced by the radioactive decay of uranium-238. According to studies by the EPA and the National Research Council, exposure to radon is second only tosmokingas a cause of lung cancer". (Miller 489) Radon enters through pores and cracks in concrete when indoor air pressure is less than the pressure of gasses in the soil. Indoor air will be healthier than outdoor air if you use an energy recovery ventilator to provide a consistent supply of fresh filtered air and then seal air leaks in the shell of your home.

Air pollution has unhealthy effects on people, animals and plant-life across the globe. Every time we inhale, we carry dangerous air pollutants into our

bodies. These pollutants can cause short-term effects such as eye and throat irritation. More alarming, however, are the long-term effects such as cancer and damage to the body's immune, neurological, reproductive and respiratory systems. Acid Rain is a significant air pollution problem that affects rural, suburban and urban areas that are down-wind of major industrial areas.

Acid rain is caused when sulfur and nitrogen pollution from industrial smokestacks is combined with moisture in the atmosphere. The resulting rain is acidic which destroys natural ecosystems ands buildings. Global Warming, as pollution gathers in the Earth's atmosphere, it traps heat and causes average temperatures to rise. It is hard to predict exactly howclimate changewill affect a particular area. Here are a few likely results: • A rise in sea level between 3. 5 and 34. 6 in. 9-88cm) leading to more coastal erosion, flooding during storms and permanent inundation • Severestresson many forests, wetlands, alpine regions, and other natural ecosystems • Greater threats to human health as mosquitoes and other disease-carrying insects and rodents spread diseases over larger geographical regions • Disruption of agriculture in some parts of the world due to increased temperature, water stress and sea-level rise in low-lying areas such as Bangladesh or the Mississippi River delta. Sources and health effects of air pollution | | Pollutants | Sources | Health Effects | | Nitrogen dioxide | All combustion processes (for example road vehicles | General irritation to airways including increased | | | and domestic heating) produce oxides of nitrogen (NOx)| chance of respiratory infection and impaired lung | | | which particularly in the presence of ozone is | function. | | converted into nitrogen dioxide. | | |

Primary | Road traffic (for example diesel engines, brake and | Respiratory and cardiovascular problems. Concerns | | Particulates | tyre wear); industrial sources (for example power | about long-term effects. | | | stations). | | | Secondary | Formed through the oxidation (presence of ozone) of | Respiratory and cardiovascular problems.

Concerns | | Particulates (e. g. | particular gases (for example sulphur dioxide, | about long-term effects. | | sulphates, nitrates) | nitrogen dioxide) in the atmosphere condensing to form| | | | fine particles. | | | Carbon monoxide | Road transport and industry (all combustion of carbon | Reduces the oxygen carrying capacity of blood and at | | | based fuels). low levels reduces concentration and at higher levels| | | | causes headaches, nausea, dizziness. At very high | | | | levels it can lead to death. | | Sulphur dioxide | Combustion of fossil fuels (mainly coal and heavy | Causes breathing difficulties, and irritation of the | | | oils). | eyes, nose, throat and lungs.

People suffering from | | | | asthma are particularly susceptible. | | Lead | Petrol and industry (such as smelting, and paint | Can effect the intellectual development of children, | | | works). | and at very high doses poisoning, brain and organ | | | | damage can occur. | | Benzene | Combustion and distribution of petrol. | Exposure over a long time can lead to cancer. | 1, 3 Butadiene | Combustion of petrol and diesel, and the production of| Exposure over a long time can lead to cancer. | | | rubber for tyres. | | | Ozone | Ozone is a photochemical pollutant which means it is | Exposure can cause an irritant effect on the lungs, | | | primarily formed by the reactions of other

pollutants | airway inflammation and short term respiratory | | | such as nitrogen oxides in the presence of sunlight. | symptoms. |