# Air pollution. what is it?

Environment, Pollution

Air pollutionis contamination of the indoor or outdoorenvironmentby any chemical, physical or biological agent that modifies the natural characteristics of the atmosphere. Household combustion devices, motor vehicles, industrial facilities and forest fires are common sources of airpollution. Pollutants of major publichealthconcern include particulate matter, carbon monoxide, nitrogen dioxide and sulfur dioxide. Outdoor and indoor air pollution cause respiratory and other diseases, which can be fatal. Conservation of our environment has been a topic of discussion and concern to many leaders around the world throughout history.

There is every need and reason for human beings to talk of the environment since the life wholly depends of the ability of the environment to support it without any threat. As a result, the fight against environmental pollution is still a challenge in both developed and developing countries. This aimed at having safe and sustainable water, air and soil among other natural resources. Of great concern has been air pollution. What is air pollution? This can be simply described as the introduction of harmful materials into the atmosphere which cause harm to human beings and other living things.

The question has always been the understanding of the causes of the causes of air pollution without addressing relevant control measures. Air pollution is mainly caused by exhaust gases from cars, burning of low-quality coal for heating and uncontrolled factory releases. Ownership and use of cars and other automobiles has been considered as one of the greatest developments in the transport industry. Although cars are a luxury in life, many people have never given a thought to the harm they have on the environment.

Research has revealed that exhaust gases from cars contribute significantly to air pollution in the world today. How exactly does this occur? It is important to mention that exhaust from cars, trucks and other engines release harmful gases to the atmosphere which severely affect life on earth. Common and dangerous gases emitted in the atmosphere include but not limited to carbon monoxide and nitrous oxide. Nevertheless, the process of emission has never been understood by many people who do understand air pollution. While the levels of these emissions ay seem minute and negligible, many lives continue to suffer. Global warmingwhich is a worldwide scourge mainly emanates from high levels of carbon monoxide in the atmosphere. Accumulation of this gas in the atmosphere causes pores in the ozone layer, allowing the penetration of dangerous rays to the earth surface. It is painful to mention that most of the cancer related infections affecting the current generation are highly brought about by global warming. How economical and healthy would life be without it! In addition, Carbon monoxide causes respiratory problems in human beings.

High levels of this gas inhibit proper breathing which may lead to suffocation and eventually death. Air pollution is also caused by burning of low-quality coal for heating. The use of low-quality coal and petroleum products threatens the safety and quality of air. When this type of coal is burnt, cases such as carbon dioxide are released to the atmosphere causing extremely severe effects to the environment. This has been on the increase due to ever growing demand for coal as the main source of energy and its fair availability.

Carbon dioxide combines with oxygen and atmospheric water vapor to form a weak carbonic acid. This means that air becomes concentrated with the acid. During the process of rain formation this acid reaches the earth surface in the form acid rain which has countless effects. Acid rain is corrosive and affects plants and animals. This corrosion causes skin cancer and scorches plants. Acid rain also destroys metals and iron sheets used for roofing. Uncontrolled industrial emissions is another cause if air pollution. This has remained a thorn in the flesh of many leaders especially those from industrialized nations.

Untreated gaseous releases to the atmosphere do more harm than good to people. Gases like carbon dioxide, sulfur dioxide and nitrogen oxide contribute to thousands of health and environmental problems. Like Carbon dioxide, oxides of sulfur and nitrogen also lead to the formation of acid rain which later reaches the earth surface resulting to corrosion, destruction of crops on farms and cancer related infections among others. It is obvious that the world has to do something to salvage the atmosphere from pollution. Use of refined and good uality can help in cutting down the emission of dangerous gaseous materials in air. Finally, leaders need to formulate policies which control the amount of industrial waste released in the atmosphere. These are just but among numerous solutions towards air pollution. Nevertheless, exhaust gases from cars, burning of low-quality coal for heating and uncontrolled factory releases remain key causes of air pollution. Exposure to air pollution is associated with numerous effects on human health, including pulmonary, cardiac, vascular, and neurological impairments.

The health effects vary greatly from person to person. High-risk groups such as the elderly, infants, pregnant women, and sufferers from chronic heart and lung diseases are more susceptible to air pollution. Children are at greater risk because they are generally more active outdoors and their lungs are still developing. Exposure to air pollution can cause both acute (short-term) and chronic (long-term) health effects. Acute effects are usually immediate and often reversible when exposure to the pollutant ends. Some acute health effects include eye irritation, headaches, and nausea.

Chronic effects are usually not immediate and tend not to be reversible when exposure to the pollutant ends. Some chronic health effects include decreased lung capacity and lung cancer resulting from long-term exposure to toxic air pollutants. The scientific techniques for assessing health impacts of air pollution include air pollutant monitoring, exposure assessment, dosimetry , toxicology, and epidemiology. Although in humans pollutants can affect the skin, eyes and other body systems, they affect primarily the respiratory system. Air is breathed in through the nose, which acts as the primary filtering system of the body.

The small hairs and the warm, humid conditions in the nose effectively remove the larger pollutant particles. The air then passes through the pharynx, esophagus, and larynx before reaching the top of the trachea. The trachea divides into two parts, the left and the right bronchi. Each bronchi subdivides into increasingly smaller compartments. The smallest compartments of the bronchi are called bronchioles, which contain millions of air sacs called alveoli. Together, the bronchioles and alveoli make up the

lungs. Both gaseous and particulate air pollutants can have negative effects on the lungs.

Solid particles can settle on the walls of the trachea, bronchi, and bronchioles. Most of these particles are removed from the lungs through the cleansing (sweeping) action of " cilia", small hair-like outgrowths of cells, located on the walls of the lungs. This is what occurs when you cough or sneeze. A cough or sneeze transports the particles to the mouth. The particles are removed subsequently from the body when they are swallowed or expelled. However, extremely small particles may reach the alveoli, where it takes weeks, months, or even years for the body to remove the particles.

Gaseous air pollutants may also affect the function of the lungs by slowing the action of the cilia. Continuous breathing of polluted air can slow the normal cleansing action of the lungs and result in more particles reaching the lower portions of the lung. Briefly there are three main principle strategies to solve the air pollution problem which can be categorized as energy efficiency , reduce waste and move to non-polluting renewable of energy production. In the first place and as the simplest strategy, reducing waste can be considered.

Waste products increasing day by day and they have the effect of air pollution highly. If people care to reduce waste, the problem can be solved. To begin with, people choose eco-friendly product instead of non-environmentally friendly product such as handcraft products, paper bags and notebook. Therefore they can reduce waste. Secondly people can use hybrid cars and they can become prevalent using hybrid cars. This will not only

increase waste of environment but also people attend to protect nature. Finally we can recycle our products. We are grouping in the form of waste such as glass, plastic, paper.

We send them to recycling. In this way we reduce waste. This in three ways, we reduce waste so we can prevent the speared of air pollution. As previously stated, the second way to deal with air pollution crisis can be solved energy efficiency. People prevent unnecessary gas emissions by using energy efficiency. If they provide energy efficiency, they can reduce using fossil fuels so that they can prevent air pollution. First of all, people can benefit from sunshine. They can install solar-powered appliances in their home and job. By doing this , they can have a very large economic saving.

The energy savings in a home and job reduce energy consumption. For example, they use combining insulation, high R-value windows, weather sealing, efficient hot water heating and other that minimize energy use. Thanks to energy efficiency , they expect to see lower energy bills and lower water bills. People can be save energy with some steps. To illustrate, they can check their windows for cracks and breaks in the seals but its long way to savings energy. Another step is adjust their thermostat before going to sleep. By doing this, their thermostat doesn’t work for hours.

It is only working set hours. Secondly using time efficiency is another part of energy savings. For example the sun heats day time but it coals at night so they must use thermostat for to heat their house. This is very expensive for them. Therefore if they set up their time, they can use energy much longer and they will not have to use the thermostat. Finally people can establish

organization to direct people to use energy efficiently or can support existing organizations. Actually we have very important organizations that inform to people about energy efficiency.

These organizations are doing very important things. We can give them at least moral and financial support by joining them. Thus we can provide energy efficiency. By this ways, people can prevent a lot of elements of polluting the environment by using energy efficiency and they would avoid breathing polluted air. The third way to move non-polluting renewable of energy production. Currently widely used in fossil fuels run out and fossil fuels pollutes the air too much. Therefore people tend to non-polluting renewable energy production such as wind, water , and sun beat.

Wind power is very important source for generating electricity. According to Jacobson, the important way to improve energy security, mitigate reduce the number of death caused by air pollution to storm and bluster in the wind. It is very cheap than nuclear power plant and fossil fuels and it is cleaning. Another part of non-polluting renewable product is water rippling is another important way to product energy without polluting air. If government establish baraj, they can provide electricity for people. It is effective way to protect air pollution to people.

Actually this way has been used worldwide for a long time to generate huge amounts of power from water stored. In this ways, people save energy as well as they protect nature and they don’t pollute the air. They would do something that does not harm for humans. To sum up, reduce waste, energy efficiency and move to non-polluting renewable of energy productivity are

the three main ways to solve air pollution problem. Reduce waste is the easiest way to solve air pollution because it needs much less labor work than the other ways but it will be satisfied for to cleaning environment.

Energy efficiency is the best way to solve air pollution because of helping by whole people that they can help and support energy efficiency. Because energy efficiency save both the environment and theirmoneyand move to non-polluting renewable of energy production is still the most difficult way to solve air pollution. The information show that people pay more attention to this issue every day andscience and technologyis developing rapidly people believe that experts will solve the problem. We should give more effort to solve this problem until that day.