

# Air pollution 19

[Environment](#), [Pollution](#)



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1. ABSTRACT In recent years, our environment has been dealt with on a very serious level. This due to the uncontrollable contamination has been done by the irresponsible people who mostly involve in manufacturing. On the other hand, person who not involve with such a thing still not excused from this problem and the person is us. Moreover, we are unconscious that almost 60% from the caused of the pollution is contributed by us. Air pollution is a chemical or particulate matter or biological agent that modifies the natural characteristics of the atmosphere. So, our goals to conduct a research on air pollution. This include the investigation on its sources, future effects to human being either short-term or long-term effect and included with some efforts to cope with this problem. We had accomplished this research by searching the information and done some revision. We had surfing the internet, done some revision on the book about air pollution and made an informal interview among our friends, asking them their opinion about air pollution.

2. INTRODUCTION Human is 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. Factors contributing toward the growing air pollution problem are the industrialization of society, the introduction of motorized vehicles and the explosion of the population. 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. These pollutants are isolated 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 gigantic injections of sulfur dioxide and suspended particulate matter are emitted by a large volcanic eruption. Worldwide air pollution is responsible for large numbers of deaths and cases of respiratory disease. While major stationary sources are often identified with air pollution, the greatest source of emissions is actually mobile sources, mainly automobiles. Gases such as carbon dioxide, which contribute to global warming, have recently gained recognition as pollutants by some scientists. Other recognizes the gas as being essential to life and therefore not capable of being classed as a pollutant. . 3. PROBLEM DEFINITION The combustion of gasoline and other hydrocarbon fuels in automobiles, trucks, and jet airplanes produces several primary pollutants: nitrogen oxides, gaseous hydrocarbons, and carbon monoxide, as well as large quantities of particulates, chiefly lead. In the presence of sunlight, nitrogen oxides combine with hydrocarbons to form a secondary class of pollutants, the photochemical oxidants, among them ozone and the eye-stinging peroxyacetylnitrate (PAN). Nitrogen oxides also react with oxygen in the air

to form nitrogen dioxide, a foul-smelling brown gas. In urban areas like Los Angeles where transportation is the main cause of air pollution, nitrogen dioxide tints the air, blending with other contaminants and the atmospheric water vapor to produce brown smog. Although the use of catalytic converters has reduced smog-producing compounds in motor vehicle exhaust emissions, recent studies have shown that the converters produce nitrous oxide, which contributes substantially to global warming. In cities, air may be severely polluted not only by transportation but also by the burning of fossil fuels in generating stations, factories, office buildings, and homes and by the burning of garbage. The gigantic combustion produces tons of ash, soot, and other particulates responsible for the gray smog of cities like New York and Chicago, along with huge quantities of sulfur oxides which also may be result from burning coal and oil. These oxides oxidize iron, damage building stone, decompose nylon, tarnish silver, and kill plants. Air pollution from cities also affects country areas for many miles downwind. Every industrial process exhibits its own pattern of air pollution. Petroleum refineries are responsible for extensive hydrocarbon and particulate pollution. Iron and steel mills, metal smelters, pulp and paper mills, chemical plants, cement and asphalt plants—all discharge vast amounts of various particulates. Uninsulated high-voltage power lines ionize the adjacent air, forming ozone and other hazardous pollutants. Airborne pollutants from other sources include insecticides, herbicides, radioactive fallout, and dust from fertilizers, mining operations, and livestock feedlots. Air pollution is responsible for major health effects. Every year, the health of countless people is ruined or dying out by air pollution. Many different chemicals in the air affect the human

body in negative ways. Just how sick people will get depends on what chemicals they are exposed to, in what concentrations, and for how long. Studies have estimated that the number of people killed annually in the US alone could be over 50, 000. Older people are highly vulnerable to diseases induced by air pollution. Those with heart or lung disorders are under additional risk. Children and infants are also at serious risk. Because people are exposed to so many potentially dangerous pollutants, it is often hard to know exactly which pollutants are responsible for causing sickness. Also, because a mixture of different pollutants can intensify sickness, it is often difficult to isolate those pollutants that are at fault. Many diseases could be caused by air pollution without their becoming noticeable for a long time. Diseases such as bronchitis, lung cancer, and heart disease may all eventually appear in people exposed to air pollution. Air pollutants such as ozone, nitrogen oxides, and sulfur dioxide also have harmful effects on natural ecosystems. They can kill plants and trees by destroying their leaves, and can kill animals, especially fish in highly polluted rivers. Like photochemical pollutants, sulfur oxides contribute to the incidence of respiratory diseases. Acid rain, a form of precipitation that contains high levels of sulfuric or nitric acids, can contaminate drinking water and vegetation, damage aquatic life, and erode buildings. When weather condition known as a temperature inversion prevents distribution of smog, inhabitants of the area, especially children and the elderly and chronically ill, are warned to stay indoors and avoid physical stress. The dramatic and incapacitating effects of severe air pollution episodes in cities throughout the world have alerted governments to the necessity for crisis procedures. Even

everyday levels of air pollution may insidiously affect health and behavior. Indoor air pollution is a problem in developed countries, where efficient insulation keeps pollutants inside the structure. In less developed nations, the lack of running water and indoor sanitation can encourage respiratory infections. Carbon monoxide, for example, by driving oxygen out of the bloodstream, causes apathy, fatigue, headache, disorientation, and decreased muscular coordination and visual acuity 4. METHOD OF SOLUTION

Air pollution has many terrible effects that need to be restrained. In order to accomplish this, governments, scientists and environmentalists are using or testing a variety of methods aimed at reducing pollution. There are two main types of pollution control which is input and output control. Input control involves preventing a problem before it occurs, or at least limiting the effects the process will produce. There are five major input control methods. People may try to restrict population growth, use less energy, improve energy efficiency, reduce waste, and move to non-polluting renewable forms of energy production. Furthermore, the production of automobile pollution can be decreased with highly beneficial results. Output control, the opposite method, seeks to fix the problems caused by air pollution. This usually means cleaning up an area that has been damaged by pollution. Input controls are usually more effective than output controls. Output controls are also more expensive, making them less desirable to tax payers and polluting industries. Current air pollution control efforts are not all highly effective. In wealthier countries, industries are often able to shift to methods that decrease air pollution. In the United States, for example, air pollution control laws have been successful in stopping air pollution levels

from rising. However, in developing countries and even in countries where pollution is strictly regulated, much more needs to be done. Efforts to reduce pollution from mobile sources includes primary regulation, expanding regulation to new sources such as cruise and transport ships, farm equipment, and small gas-powered equipment such as lawn trimmers, chainsaws, and snowmobiles, increased fuel efficiency such as through the use of hybrid vehicles, conversion to cleaner fuels such as bioethanol, biodiesel, or conversion to electric vehicles with renewable energy sources which are batteries or clean fuel such as hydrogen being used for transport and storage. 5. RESULT AND DISCUSSION 6. CONCLUSION 7. REFERENCES 8. APPENDIX