

Free how factories pollute the environment research paper example

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



Factories have always been seen as emitters of enormous smokes, which makes factories as major contributors of air pollution. But, aside from the air pollution, factories have been contributing to land pollution, as well as water pollution. These pollutions were mainly because of the emissions of harmful gases, mixing of toxic and hazardous chemicals on natural water resources, direct contact of harmful chemicals and wastes to surface soils (Peterson, para. 1). Moreover, although different factories produce different waste products, still, the environment is always at risk.

One of the most familiar effects of factories is how it contributes to air pollution. Any introduction of a substance proven to be harmful to the environment and living things is considered pollution. Industrialization had a major influence to this pollution. As factories emerged, emissions of harmful greenhouse gases, such as carbon dioxide, were increased. As a matter of fact, industrialization and some other human-caused activities for the past 150 years pushed the carbon dioxide level in the atmosphere even higher than it was hundreds of thousands of years ago (National Geographic, np). Since the transformation of feudalism to capitalism, many wealthy people concentrated on using their properties for mass production for profit rather than consumption because of the expanding market. As the market expands, the people saw profit on selling what is demanded by many, and so decided to invest on particular products. Thus, people started to use better machineries, constructed large facilities, and hiring workers for production. This machines and factories used huge amount of energy to run, and so large amounts of coal were used (Hale, p. 13-16). This fossil fuel burning caused the release of too much carbon dioxide. Moreover, as more and more

factories were built, more lands were used for the construction site and so, more trees were cut for construction materials. Because of the massive loss of trees, the absorption of carbon dioxide lessened, thus, the atmosphere became overloaded with carbon dioxide and other harmful gases (eco-issues, np).

Also, environmental advocacies only strengthened since the last quarter of the 20th century. Therefore, the environmental havocs of the industrial revolution were poorly studied during the time, and so, environmental regulations almost do not exist. Although there were studies regarding the environment, these studies were relatively small as they focused on a very specific field, e. g. rivers (Kasa, p. 70-74; Rosen, p. 566).

For better understanding of how factories pollute the environment, it must be necessary to learn what pollutants do factories emit or release, and how they affect the environment. First of all, the greenhouse effect is the nature's way of heating the Earth by which natural activities, such as plant respiration, emit carbon dioxide and water vapor to trap some of the radiant heat of the sun inside the Earth's atmosphere (Lerche, para. 1). But, as usual, humanity intervened with this natural process. As the Industrial Revolution came, man-made machines and factories increased the emission of these greenhouse gases, thus, heating the Earth rapidly. These activities were the main reason of the rapid heating of the Earth, or as we know it, the Global Warming (Beck et al., 723-725). Carbon dioxide is considered one of the most damaging greenhouse gases which is being released into the atmosphere by human activities by burning of fossil fuels (Peterson, para. 2). Moreover, carbon dioxide is mainly a byproduct of factories manufacturing

metals, plastics, minerals and chemicals (Lerche, para. 4). Aside from carbon dioxide, factories are also major emitters of another greenhouse gas, which is sulfur dioxide (Peterson, para. 2). One other dangerous gas is methane, which is believed to be 23 times more potent than carbon dioxide as a greenhouse gas. The factories that emit huge amounts of methane are the factories that are processing natural gas, wastewater or petroleum (Lerche, para. 5). As a matter of fact, 50 % of the present greenhouse gases is attributed to industries and factories generating electricity (Peterson, para. 2).

The ozone layer is a thin sheet of blanket made up of ozone (O₃) molecules that protect all life on Earth from too much radiation from the sun. Needless to say, ozone is somewhat essential to survival (EPA, np). Thus, its destruction is considered a threat to life. In reality, the destruction of the ozone layer is already happening. The destruction is because of the emission of gases and chemicals that are depleting the ozone layer. These chemicals include chlorofluorocarbons (CFCs), carbon tetrachloride (CCl₄), halon, etc. The production of these chemicals are mainly because of factories specialized in air conditioning systems, fire extinguishers, agricultural fumigants and cleaning solvents (Commonwealth of Australia, np). Although considered helpful because it protects the earth from radiations, ozone molecules that are ground-level are considered harmful not only to the environment but also to other living things. Emission of ozone at ground-level enhances global warming (Lerche, para. 2), and this ground-level ozone is often referred to as smog (EPA, np). Ground-level ozone have been proven to cause some respiratory problems, not just to humans but also to other

living things (American Lung Organization, np). Yearly, ground-level ozone reduces crops by up to \$500M. The main producers of ozone are factories that specialize in manufacturing metals or chemical solvents (Lerche, para. 2).

Aside from affecting the air, factories had major effects on natural water resources. One of the major issues concerning water pollution is thermal pollution brought about by factories and industries specializing in generating electricity and food processing. In these factories, water is used as coolers, or to condense steam that is needed to turn the turbines. If the temperature of water rises, its oxygen and carbon dioxide level drops, which could be fatal to many marine plants and animals. Another problem is that the animals adapted to this warm temperature will have serious consequences once the temperature of the water returns to normal. Another source of water pollution that is attributed to factories is the release of toxic chemicals such as polychlorinated biphenyls (PCBs) and trichloroethene (TCE) and other organic wastes, which are proven harmful to marine ecosystem. These toxic chemicals enter the water system from the factory discharge pipes (Dozier, p. 2-3).

One example of water pollution could be seen from concentrated animal feeding operations (CAFOs) which are considered more like factories than farms (Consumers Union SWRO, p. 1). CAFOs are a specific type of factories that are specializing in raising animals, usually, chicken and cow, in a high-density scale. Because of this high-density of animals, the issue about CAFOs is the amount of manure it produces. CAFOs produce manure ranging from 2, 800 tons to 1. 6 million tons per year. And unlike humans, sewage treatment

facilities do not exist for livestock manure. A large quantity of this manure is a serious problem. Ground application of manure has limitations. If the ground is frozen, it is incapable of absorbing manure. But in general, the land has absorption limits when it comes to manure. If exceeded the limit, macronutrients from the manure such as nitrogen and phosphorous could pose a great threat to the soil, and affect many living things. Also, violent rains and storms could cause flooding which may overflow lagoons that could carry waste products into surface waters such as lakes, rivers and reservoirs. Moreover, the ground application could pose a more serious problem which is contamination of the groundwater, which is a major source of drinking water. For instance, a well in Idaho was detected to contain levels of veterinary antibiotics and nitrates. Contamination of water causes buildup of ammonia. When in the water, ammonia causes oxygen depletion that imposes life threats to the aquatic ecosystem. Also, direct contact to ammonia could easily end up aquatic lives. Furthermore, ammonia breaks down leaving traces of nitrates that causes nutrient overload. When the water is overloaded with nitrates and phosphates, it could cause eutrophication which leads to inhabitable waters (Hribar, p. 1-4).

With all these information, it must be clear that factories do pollute the environment. Industrialization has a major influence to the environmental consequences that are in effect since the industrial revolution until today. Factories produce waste products that are dumped into the air, water and the land, which compromises the health of the whole ecosystem.

In summary, factories are major contributors of pollution since industrialization was born. As people saw profit, they used machineries and

built facilities that were largely using coal as a primary source of power. This fossil fuel consumption pollutes the air by producing carbon dioxide, as well as other greenhouse gases. In addition, factories produce hazardous chemicals such as CFCs and TCE that depletes the ozone layer. Moreover, factories also produce ozone that is dangerous at ground level. CAFOs produces great amounts of manure that it doesn't just pollute the land, but also contaminates the water and the groundwater, which is the primary source of drinking water. Food processing factories and electricity generating factories pollute the water through thermal pollution which endangers many aquatic life. Thus, although different types of factories affect the environment differently, in general, the environment receives damaging effects from factories.

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