

Reducing Illnesses and Death from Pollution

Subcommittee Topic Briefing

Topic Overview

Pollution is one of the greatest threats to human health and well-being around the world. Pollution can take many forms and has the ability to impact water, air, and food systems, among other areas critical to human life. Polluted drinking water, has long been one of the greatest threats to human life on Earth, and can lead directly to deadly diseases. In addition, air pollution has the ability to impact people's ability to breathe, causing significant health issues like asthma and other **respiratory issues**. Air and water pollution can also impact the food that humans need to survive. Our crops and livestock depend on pollution-free soil to provide us with healthy and nutritious food. Finally, climate change will also impact the issue of pollution significantly, as changes to the Earth's climate are likely to increase the amount of pollution in the air that we breathe and the water we drink.

Target 3.9- Reducing Illnesses and Death from Pollution

SDG Target 3.9 aims "by 2030, to substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water, and soil pollution and contamination." In 2019, the United Nations estimated that air pollution alone led to 7 million premature deaths.¹ This subcommittee will focus specifically on addressing air pollution and the issue of unsafe water, and unsanitary living conditions due to pollution. There are additional types of pollution that some countries and communities also deal with including noise pollution, light pollution, and soil pollution.

Pollution is a **byproduct** of many things essential to human life. Specifically, the energy needed to heat homes in the winter, fuel cars and buses, and produce the iPhones and laptops essential to learning from home, often creates a significant amount of pollution. For example, a trip from home to the supermarket will burn a car's fuel, meaning that chemicals like carbon dioxide, a pollutant, will be released into the air. Likewise, many of the metals and complex electronics found in an iPhone were mined from the Earth in countries Kenya, Mongolia and South Africa. Mining, as demonstrated in the picture above, can have a significant negative impact on water quality. Although we may not see the effects of pollution occurring in far away



¹ Message on World Environment Day 2019 - The United Nations - <https://www.un.org/press/en/2019/sgsm19607.doc.htm>



countries, we must recognize the challenges that pollution has on the health and safety of people around the world.

Air quality is essential for good health and well-being. As mentioned, poor air quality can lead directly to health complications such as asthma or other respiratory diseases. Those suffering from issues related to air quality often live in developing countries, and specifically in large, densely populated cities.² These cities often suffer from high rates of **airborne pollutants** due to motor vehicles, unclean energy sources, and few environmental protections put in place by the country's government. The WHO estimates that air pollution from industries, households, cars, and trucks is responsible for 7 million deaths around the world each year. In addition, air pollution is estimated to be the cause of 25% of lung cancer deaths each year and disproportionately affects elderly people and children, who are at greater risk of developing respiratory illnesses caused by air pollution.³ Air pollution is also a significant issue in developed nations like the United States, where air quality can be significantly different between various neighborhoods and communities. Often, low-income neighborhoods are located closer to polluting centers such as power plants, highways, and waste processing facilities. These residents often do not have access to clean air that can be found in city parks, forests, or other green spaces.

Rising temperatures related to climate change can raise the level of pollutants in the air that can lead to cardiovascular and respiratory disease.



Water pollution is another area that has a significant impact on human health and well-being. Clean drinking water is one of the most essential needs for human health and well-being. In developed countries, access to clean water is expected, as almost every citizen has access to water free from harmful pollutants, chemicals, or water-borne diseases. However, millions around the world do not have reliable access to clean water. One of the greatest ways to promote human health and well-being is to increase access to clean water for people in rural, developing countries, or displaced people, forced to move from their homes due to war, conflict or even climate change. In addition, clean drinking water must be accompanied by the disposal of wastewater. Wastewater can pollute clean drinking water leading to waterborne illnesses, which can lead to death. Climate change can also negatively impact access to clean and reliable drinking

² Air Pollution Hurts the Poorest the Most - The United Nations - <https://www.unenvironment.org/news-and-stories/story/air-pollution-hurts-poorest-most>

³ Climate Change and Health - The World Health Organization - <https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health>

water. Climate change may lead to droughts, or instances of flooding, which can cause drinking water to become polluted.



Another important aspect of pollution is soil pollution. Soil can be polluted from a number of sources, but often it is linked to water or air pollution. 'Clean' soil is incredibly important as it is necessary for growing healthy and nutritious foods. In addition, the livestock that many humans choose to eat feed off the plants and crops grown in soil. Therefore there is a strong connection between clean soil and healthy humans.

The final two types of pollution are noise and light pollution. Often, these are considered smaller issues to human health and well-being but they are still quite important to a person's overall health and well-being, especially after issues around air and water pollution may have been solved for some people. Noise pollution can impact the long term health of a person, and can lead to greater instances of stress, sleep-related issues and more. Light pollution can also cause long term health issues as it can increase the risk of obesity, depression and sleep disorders.

The effects of pollution can be felt throughout the world, however, those most affected by pollution are often people living in poverty. Those who live in poverty, in both developed and developing countries, are often exposed to greater levels of pollution, and experience the most negative effects of a polluted environment. Often, those living in poverty live near highly polluting factories, power plants, highways, or other areas that can directly impact human health and well-being. In the case of water pollution, affected communities often live downstream of polluting centers like factories, mining facilities or similar buildings. Unfortunately, the communities that are affected the most often lack access to healthcare facilities and medical professionals to support their health needs. Because the poor are more likely to live near places that produce pollution, such as waste processing facilities, they are also more likely to experience the severe health conditions that can be caused by waterborne pollutants.⁴

Fortunately, the global community can limit the harmful effects of pollution, and promote healthier societies. By focusing on providing communities with reliable and clean water, while creating wastewater disposal systems, the international community can save millions of lives each year. In addition, the global community can commit to reducing air pollution, by promoting cleaner energy systems, reducing the use of fossil fuels, and reducing carbon emissions. Individual countries can also promote a pollution-free environment by using **environmental regulations** to ban unhealthy practices, such as the dumping of chemicals into rivers, or promote healthy practices, like renewable energy

⁴ Air Pollution Hurts the Poorest the Most - The United Nations - <https://www.unenvironment.org/news-and-stories/story/air-pollution-hurts-poorest-most>

sources. These solutions offer an opportunity to promote healthy lives, while also tackling some of the major causes of climate change.

Quick Facts

Find at least three quick facts on reducing illness and death from pollution from this briefing paper. Quick facts should be about one sentence long and provide useful information on the subcommittee topic. A good example of a quick fact is a statistic related to the topic.

1. Quick Fact:
2. Quick Fact:
3. Quick Fact:

Questions to Consider

Use the information provided in the briefing paper above, as well as your own research on your assigned country, to answer the questions below.

1. What are the different types of pollution? Which one (or two!) are the most important to health and well-being?
2. Why is soil pollution important? What effect would unhealthy soil have on human health and well-being?
3. How can developed countries help poorer countries work to improve air quality and minimize pollution related deaths and illnesses?
4. What is your assigned country's relationship with pollution related illness and death? Does your country have high environmental standards? Or are regulations hardly enforced?
5. Are specific populations in your assigned country more affected by pollution than others? If yes, why might that be?

Check to see if your assigned country has a "Health and Climate Change Profile" with the World Health Organization:

<https://www.who.int/activities/monitoring-health-impacts-of-climate-change-and-national-progress>

Glossary

Term	Description
Byproduct	A byproduct is a secondary product made from the creation of something else. For example, the byproduct from creating orange juice, the orange peels, can be used to make various cleaning products or cosmetics.
Pollution / Pollutants	Any substance, as certain chemicals or waste products, that causes the air, soil, water, or other natural resource to be harmful or unsuitable for a specific purpose.
Waterborne pollutant	Harmful substances—often chemicals or microorganisms—that contaminate a stream, river, lake, ocean, or other body of water, degrading water quality and making it toxic to humans or the environment.
Respiratory Issues	Respiratory issues are health issues related to a human’s lungs and breathing. Air pollution can affect a person’s ability to breathe easily, leading to poor health and well-being.
Airborne Pollutant	A harmful substance that can be found in the air, usually chemicals or other hazardous materials. An example of an airborne pollutant is Black Carbon.
Environmental Regulations	Environmental regulations are tools used by governments to control how individuals and businesses must treat the environment. Often governments choose to restrict what businesses and individuals can do, such as dumping chemicals into ground, or they can promote certain environmental policies as well.