



# EFFECTS OF EXCESSIVE MINING ON THE ENVIRONMENT

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Mining is an important activity that has been the backbone of industrialization and economic growth for many decades. The effects of excessive mining on the environment, however, have been alarming. The mining industry has had a negative impact on the environment in many different ways. The extraction of minerals and resources from the earth's surface has caused various environmental issues that affect the health and well-being of all living beings on the planet. Global concerns have been raised regarding the damaging impact of excessive mining on the environment as the United Nations Environment Programme (UNEP) estimated that the mining industry is responsible for 10% of global energy consumption and generates around 50% of global waste.

The mining industry is one of the largest emitters of greenhouse gases, contributing to global warming and climate change. In addition, mining activities can lead to soil erosion, loss of biodiversity, deforestation, water pollution, and degradation of air quality. Mining activities cause extensive environmental damage that can have lasting consequences. One of the most significant issues caused by mining is soil erosion. The removal of topsoil during mining activities leads to soil erosion, which can have long-term effects on soil quality and fertility. Soil erosion also leads to the siltation of water bodies, causing water pollution and the destruction of aquatic habitats.

Mining activities also lead to deforestation, which is a significant contributor to climate change. Trees absorb carbon dioxide and release oxygen, making them

essential in regulating the earth's temperature. Deforestation caused by mining activities results in a decrease in the number of trees, leading to increased greenhouse gases in the atmosphere, contributing to global warming. This also leads to the loss of biodiversity, the extraction of minerals and resources from the earth's surface disrupts the ecosystems, leading to the loss of habitats for various species of flora and fauna. The loss of biodiversity definitely has long-term effects on ecosystems, not only leading to the extinction of various species, but also affecting the food chain and the functioning of ecosystems.

Excessive mining activities can also have severe impacts on human health. The harmful pollutants released into the air, water, and soil can have toxic effects on humans and animals. For example, mining activities lead to a release of heavy metals such as lead, mercury, and cadmium, which are known to be toxic to humans and cause health problems such as cancer, respiratory issues, and neurological damage.

In addition, mining activities if not done properly while following correct steps of disposal can also lead to water pollution, and contaminated water sources can lead to the spread of water-borne diseases, affecting the health of people and animals who rely on these water sources. Mining activities can also lead to increased air pollution, as dust and particulate matter released during mining operations can cause lung damage, asthma, and other respiratory issues.

India is a developing country that is rich in mineral resources, such as coal, iron ore, bauxite, and limestone.

The mining industry in India has witnessed a significant increase in the past few decades due to the growing demand for minerals and resources.

According to a report by the Centre for Science and Environment (CSE), mining activities in India have caused severe environmental damage, particularly in areas such as Goa, Jharkhand, and Chhattisgarh. Mining has led to the destruction of forests, contamination of water sources, and loss of biodiversity.

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The report further states that the mining industry in India operates without proper regulations and monitoring, leading to uncontrolled environmental degradation. The lack of regulation has also led to the exploitation of labour and the violation of human rights. The local population has little say in the mining activities, and their voices are often ignored. The construction of mines often requires a large area of land, and these areas are often the location of previously undisturbed natural habitats. This results in the removal of large areas of habitat (usually forest) to build the mine, followed by other negative impacts from the presence of many people moving to, living, and working around the mine.



SOURCE- Lynne

Mining refers to removing geological resources from the Earth, usually used as raw material. Mining for a wide range of materials occurs in many different parts of the world. Coal, gold, iron, and sand are some of the most commonly mined resources. Humans have been mining for thousands of years, with the earliest known mine found on Eswatini's Bomvu Ridge. This mine, the Ngwenya Mine, is over 40,000 years old, based on radiocarbon dating. Despite being very useful to humans, mining often has a detrimental effect on the surrounding environment and animal species, including the surrounding human populations. In the following, we will go over the environmental impact of mining, including both negative and positive effects, and provide some examples.