

# Environmental Toxicology: The Biological Consequences of Pollutants

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## About the Study

Our atmosphere has altered considerably in recent days. An increasing global population, global warming, increased industrialization and advancing technology and economics are all crucial variables contributing to the changes. Other changes include increased air pollution, rising solid waste, acid rain, ozone depletion and an increase in endocrine disrupters in the environment. These alterations have had an impact on living beings' health and well-being. Some of the issues are listed here.

## World Population

The global population has been gradually expanding, reaching roughly 6.8 billion people in 2010. However, the increases vary from nation to country. China and India alone account for 37 percent of the world's population, according to the US Census Bureau and with China's general population growth rate slowing to 0.5 percent yearly, the predicted peak is 1.4 billion people, fewer than previously expected. In comparison India's yearly growth rate is 1.4 percent, owing to a fertility rate of 2.6 births per woman, as opposed to China's 1.6 births per woman. India is also disproportionately youthful, having a population of about 1.2 billion people. India is expected to overtake China as the world's most populated country during the next several decades, with predictions ranging from 1.5 billion to 1.9 billion people.

Many scholars believe it is also past time for India to take action. Different methods to lower birth rates are being undertaken in India to deal with the dire situation. A pilot initiative, for example, has been launched in Satara, a city in Maharashtra state. To reduce birth rates, the city has given monetary bonuses to young women. In contrast to both China and India, Russia has been experiencing a declining population in recent years. According to projections by the United Nations, Russia's population, currently 140 million will likely be decreased to 116 million by 2050, a decrease of more than 17% or more than 4% a year.

## Global Climate Changes: Global Warming

The global tropospheric temperature climbed 0.22°C to 0.26°C every decade from 1978 to 2002, according to the US National Oceanic and Atmospheric Administration (NOAA). The rise corresponded to the worldwide warming trend as measured by surface meteorological stations. According to a recent New York Times investigation, the icecap atop Tanzania's Mount Kilimanjaro is receding at such a rapid rate that it may vanish in only 15 years. Furthermore, its glaciers are fast decreasing, with one site losing about one meter of thickness since early 2002. According to some geologists, when first extensively examined, the mountain lost 82 percent of its ice cap since 1912. The Northern and Southern Ice Fields of the mountain have thinned by 1.9 and 5.1 meters, respectively. The mountain, which stands at 5,896 meters above sea level, is one of Tanzania's most popular tourist destinations. It generates an estimated \$50 million in annual revenue, which is now in jeopardy.

Ocean temperature, salinity, and flow patterns have been demonstrated to be affected by climate change. Warmer temperatures weaken the ice, making it more vulnerable to wind and other pressures. Scientists believe this has already had an impact on the stability of ice shelves in the Antarctic. Indeed, in 1995 and 2002, two pieces of ice the size of a small nation broke off the Larsen shelf ice on the Antarctic Peninsula. Only 100 years ago, the entire northern coast of Ellesmere Island was edged by endless shelf ice. Approximately 90% of the shelf was depleted. Since 1967, existing records suggest a 0.4°C increase every ten years and the average July temperature has been 1.3°C since then. Global warming could thaw the top 3.3 meters of permafrost at the bottom surface in most parts of the globe by 2100, affecting ecosystems across Alaska, Canada and Russia on a scale not seen in thousands of years.

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