

Air pollution leading cause of death among children in sub-Saharan Africa

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According to a 2015 report by UNICEF, 500,000 children across sub-Saharan Africa died from pneumonia, and researchers found that air pollution was a leading contributor to pneumonia's prevalence. An overwhelming majority of the deaths included children under the age of five.

Several recent studies have expanded upon UNICEF's findings, including one published last week in the science journal *Nature*, conducted by a team of researchers at Stanford University and the University of California San Diego, in which scientists found a "[r]obust relationship between air quality and infant mortality in Africa."

The study found that dirty air poses a deadly threat across the African continent, in both urban and rural areas alike. According to researchers, the scale of air pollution is not easily quantifiable due to the lack of air quality monitoring equipment in most regions and urban centers. Notwithstanding, what scientists have discovered is both alarming and extremely dire for public health.

"Air pollution is actually a much more important cause of excess mortality in sub-Saharan Africa than previously thought," said Jennifer Burney, a co-author of the study.

The Stanford study relied on an array of data collected by satellites from over 30 African countries, together with over 65 demographic health surveys from these countries between 2001 and 2015 to arrive at their conclusion of a "robust relationship" between air pollution and excess mortality.

The study utilized earlier research into the effects of air pollution in Africa conducted by the Organization for Economic Cooperation and Development (OECD), which found that polluted air on the continent is deadlier than malnutrition or dirty water.

OECD researchers found that across Africa, annual deaths brought by ambient particulate matter pollution increased by 36 percent between 1990 and 2013.

According to the World Health Organization (WHO), for children in Africa who make it past age five, the effects of persistent air pollution can stunt brain development, trigger asthma and cause strokes and cancers later as adults.

The OECD's study, conducted in 2016, was the first attempt to quantify both the human and financial toll of air pollution on the continent, and its findings were shocking: dirty air is killing more than 700,000 people a year prematurely, significantly more than the 542,000 annual deaths for unsanitary water, 275,000 for malnutrition, and 391,000 for lack of sanitation.

Corroborating the OECD data was a study by *Lancet* published in February, titled "Commission on pollution and health," which found that over 9 million people died prematurely in 2015 around the world from the effects of dirty air, more than three times the deaths from AIDS, tuberculosis, and malaria combined. In the most severely affected countries, pollution-related diseases are responsible for one death out of every four.

Notably, the *Lancet* study's findings concluded that pollution disproportionately kills the poor and more vulnerable; 92 percent of deaths caused by air pollution occur in low-income and middle-income countries, and children in these countries are especially high risk for pollution-related diseases.

The OECD study relied on research conducted by UK scientist Mathew Evans, professor of atmospheric chemistry at York University, who spoke to the *Guardian* regarding the complexity in the study of air pollution in Africa.

"London and Lagos [Nigeria] have entirely different air quality problems. In cities such as London, it's

mainly due to the burning of hydrocarbons for transport. African pollution isn't like that," Evans explained. "There is the burning of rubbish, cooking indoors with inefficient fuel stoves, millions of steel diesel electricity generators, cars which have had the catalytic converters removed and petrochemical plants, all pushing pollutants into the air over the cities. Compounds such as sulphur dioxide, benzene and carbon monoxide, that haven't been issues in western cities for decades, may be a significant problem in African cities. We simply don't know."

Reflecting the generalized impoverishment of the African masses across the continent, many households use open fires for cooking and kerosene for lighting. Electricity is either unaffordable or unavailable for many residents.

The OECD calculated the financial costs of premature deaths caused by air pollution in 2013 were \$215 billion for outdoor air pollution and \$232 billion for indoor, or household air pollution.

Henri-Bernard Solignac-Lecomte, head of the Europe, Middle East and Africa unit at the OECD development center, made clear the economic impact of air pollution by listing several courses of action for governments, which are very unlikely to be undertaken, as they would threaten the profits to be made by large corporations and banks.

"Air pollution in Africa increasingly hurts people and hinders economic development. Bold action to improve access to electricity, using clean technologies such as solar power, can contribute to reducing the exposure of the poorer families to indoor smog from coal or dung-fired cooking stoves." Solignac-Lecomte suggested.

In his concluding statement of the OECD study, its author, Rana Roy wrote: "If Africa's local air pollution is contributing to climate change today, at a time when its population stands at 1.2 billion, or 16% of the world's population, it is safe to suppose that ... it is likely to contribute considerably more when its population increases to around 2.5 billion, or 25% of the world's population in 2050, and thence to around 4.4 billion, or 40% of the world's population in 2100."

While of immense scientific value these latest studies are severely limited by their political scope. Nowhere referenced in either the OECD report or the study published in *Nature* is any substantive analysis undertaken of the impact of the renewed "scramble for

Africa" by international corporations and banks and their drive to extract profits from Africa's working masses and vast economic resources.

Not considered in any of the studies is the impact of Washington's wars and military interventions currently being conducted across the continent, nor the broad impact of mass migration of people fleeing war-torn countries and regions, the consequence of decades of Washington's imperialist interventions. The OECD bases its report on the absurd premise that capitalism can reduce social misery, if only organized in a more "humane" way.

But it is precisely the capitalist system itself, and the social misery it produces, that leads to the intolerable state of health and well-being for hundreds of millions across Africa.

The only effective way to combat air pollution and its adverse effects is through the overthrow of capitalism by the African working class, replacing it with socialism, a social and economic system which will reorganize productive activity based on social and human need rather than the profit motives of a wealthy elite.



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