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***MORE THAN 1 MILLION DEATHS LINKED TO
AIR POLLUTION EXPOSURE IN AFRICA
Household Air Pollution Poses Severe Health Risks
to Infants and Young Children.***

BOSTON, MASSACHUSETTS, OCTOBER 27, 2022 – Nearly all the African continent faces some of the most severe health impacts in the world caused by air pollution, with several countries experiencing some of the highest levels of air pollution in the world, according to a new report published by the U.S.-based research organization Health Effects Institute (HEI). The new report, *The State of Air Quality and Health Impacts in Africa*, provides a comprehensive analysis of major air pollution sources and related health impacts in the continent of more than 1.2 billion people.

Released just before the U.N.’s upcoming COP27 Climate Change Conference in Egypt, the report finds that air pollution is the second leading risk factor for death across the continent. Africa is home to five of the top ten most heavily polluted countries worldwide in terms of outdoor fine particulate matter (PM_{2.5}).

Outdoor PM_{2.5} is the most consistent predictor of deaths from cardiovascular, respiratory, and other diseases in studies of long-term exposure to air pollution. In 2019, air pollution contributed to an estimated 1.1 million deaths in Africa, with 63% linked to exposure to household air pollution (HAP).

Country	Population-Weighted PM _{2.5} (µg/m ³)	National Ambient Air Quality Standards
Niger	80.1	NO
Nigeria	70.4	YES
Egypt	67.9	YES
Mauritania	66.8	NO
Cameroon	64.5	NO

Five of the top 10 countries in the world with the highest levels of PM_{2.5} are in Africa. Only two of those currently have air quality stand

Impacts of Air Pollution on Children

Access to clean energy across Africa is not equitably distributed, leading to larger disease burdens in certain areas. Across East, West, Central, and Southern Africa, an estimated 75% of the population relies on burning solid fuels such as coal, wood, and charcoal for cooking, exposing residents to high

concentrations of harmful pollutants at home every day. Newborns and children under five years old in these regions are at a particularly high risk from household air pollution linked to use of solid fuels for cooking. About 236,000 newborns die within the first month of life from air pollution exposure, with 80% of those coming from HAP. In 2019, 14% of all deaths in children under five across Africa were linked to air pollution. The impacts on newborns and infants also have long-term consequences for overall health, including issues with lung development and increased susceptibility to communicable diseases such as lower respiratory infections in young children.

Caradee Wright, Chief Specialist Scientist with the South African Medical Research Council, said, “This report gives evidence of the substantial threat air pollution poses to the health, and even life, of babies and children under the age of 5 years. This vulnerable group needs special attention to mitigate their exposures, for example, through policy and intensive awareness campaigns with practical solutions for mothers and caregivers.”



Percentage of the population using solid fuels for cooking in countries across Africa in 2019.

Air Pollution Sources Across the Continent

In Africa, $PM_{2.5}$ comes from many of the same sources found elsewhere in the world, including use of solid fuels for cooking, fossil fuel use (coal, oil, and gas) for energy production, vehicles, industrial and semi-industrial activities like artisanal mining, agriculture, forest fires, and open waste fire pits. In parts of Africa, windblown dust, a natural source of air pollution, is also a major contributor to $PM_{2.5}$ levels.

Air pollution sources and related health impacts can vary widely across the continent. By region, Western Africa experiences the highest $PM_{2.5}$ pollution with an average concentration of $64.1 \mu\text{g}/\text{m}^3$, while Southern Africa has the lowest at $26.5 \mu\text{g}/\text{m}^3$. In Southern Africa, use of fossil fuels contributes as much as 41% of the total outdoor $PM_{2.5}$ levels, whereas in Eastern Africa, the contribution is only 11%.

Targeted Actions are Beginning: More Needed

While air pollution levels are high, countries across Africa are implementing a wide range of programs to lower the impacts of air pollution. So far, 17 countries in Africa have established some national air quality policies, and many have included action on air pollution sources, especially household air pollution, as part of their country’s Nationally Determined Contributions (NDCs). In 2019, Africa had one of the lowest energy access rates in the world, with fewer than one in 20 people living in the Democratic Republic of the Congo, Ethiopia, Madagascar, Mozambique, Niger, Uganda, and Tanzania having access to clean fuels for cooking. At the same time, a scarcity of ground level air quality monitoring stations means countries are not able to accurately track their progress towards meeting air quality objectives and

standards.

Dr. Patrick de Marie Katoto of the Catholic University of Bukavu, Democratic Republic of the Congo, said, “Air pollution greatly contributes to the rising frequency of chronic noncommunicable diseases in Africa, putting further strain on a health system already stretched by chronic infectious diseases and, more recently, COVID-19. These findings call for the African Union and member states to promote, plan, and fund air quality interventions to prevent unnecessary disabilities and deaths throughout the continent.”

Key Connections Between Air Pollution and Climate

As the world’s nations convene next month in Egypt for the COP27 climate meetings, Africa will consider how energy transitions can be designed to be efficient, economically feasible, sustainable, and environmentally friendly—a complex challenge that requires a nuanced conversation at the nexus of energy, climate, air quality, and health. Countries in the African Union have also adopted the “Agenda 2063,” a continent-wide program that lays out a strategic framework designed to deliver on its goal for inclusive and sustainable development for all residents by the year 2063. Meeting these challenges head-on will bring dual benefits of public health improvements and reductions in greenhouse gas emissions across Africa.

This report is released in coordination with a [new report from the Clean Air Fund](#) that examines the need for urgent action to stem the financial costs that air pollution will have on Africa’s fastest growing cities.

[Read the full *The State of Air Quality and Health Impacts in Africa* report here.](#)

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About the State of Global Air

The State of Global Air (SoGA) is a research and outreach initiative that provides reliable, meaningful information about air quality and its health impacts around the world. A collaboration of the Health Effects Institute and the Institute for Health Metrics and Evaluation’s Global Burden of Disease project, the program gives citizens, journalists, policymakers, and scientists access to high-quality, objective information about air pollution exposure and its health impacts. All data and reports are free and available to the public.

About HEI

The Health Effects Institute (HEI) is an independent, non-profit research institute funded jointly by the U.S. Environmental Protection Agency, industry, and foundations to provide credible, peer-reviewed

science on air pollution and health effects to inform air quality decisions. HEI's research is selected, overseen, and peer reviewed by leading subject matter experts on environment and health without involvement of HEI's public or private sponsors.