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# Air Pollution In Ghana: Causes, Effects And Solutions

Causes, effects and solutions for Air Pollution in Ghana

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Smoking of fish over an open fire with wood at Jamestown, Accra, Ghana/ November 2018

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# AIR POLLUTION IN GHANA

Air Pollution remains a major risk factor for premature death in Ghana, as thousands continue to die from inhaling toxic fumes from old and rickety cars, rubbish fires, road dust and soot from biomass-fuelled cookstoves.

Air pollution is linked to around 7 million premature deaths worldwide every year, with countries in Africa and Asia worst affected.<sup>1</sup>

Ghana's annual urban outdoor air ([31.1](#) micrograms per cubic meter [ $\mu\text{g}/\text{m}^3$ ]) far exceeds WHO guidelines for  $\text{PM}_{2.5}$  - ultra-fine particles of 2.5 or less in diameter which can clog human lungs - (WHO's recommended [annual guideline](#) for  $\text{PM}_{2.5}$  is  $10 \mu\text{g}/\text{m}^3$ )

Air quality monitoring in Ghana is limited to only 15 locations (by gravimetric method), all in the Greater Accra Region. None for the rest of the country's 15 regions (6 newly created).<sup>2</sup>This lack of sufficient air quality monitoring networks could be contributing to Ghana's poor air quality.

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## WHAT ARE THE CAUSES OF AIR POLLUTION IN GHANA?

Ghana's dirty air (both outdoor and indoors) are characterized by:

- 1. Toxic smoke from car exhausts.** Example - 'trotro'. 'Trotros' are a popular form of transportation in Ghana. Mostly old and rickety, these minibuses frequently billow out deadly smoke into the streets, taking a deadly toll on urban dwellers.
- 2. Open burning of residential trash.** Ghana's waste management system is probably one of the worst in the world. Many areas of Accra, Ghana's capital city, are usually littered with trash, especially plastics.

Because of this poor waste management system, residents sometimes burn trash in the open, sending toxic fumes into nearby homes, businesses, etc.

**3. Biomass burning.** Many Ghanaians still rely on solid fuels such as charcoal and wood for cooking in cookstoves indoors and on the streets (food vendors). Wood-based biomass is the most dominant source of energy for more than 80% of households in Sub-Saharan Africa (SSA), according to a World Bank study<sup>3</sup>.

Biomass burning emits soots especially inside homes, and these are known to cause heart disease, pneumonia, stroke, lung cancer, and other cardiorespiratory diseases. Indoor or household air pollution kills close to 4 million people worldwide every year. <sup>4</sup>



**Smoking of fish over an open fire with wood at Jamestown, Accra, Ghana/ November 2018**

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**4. Dust from unpaved roads.** Residential road networks in Ghana are mostly unpaved.



Abokobi, near Pantang Hospital, one of Ghana's premier Psychiatric Hospitals - Accra, Ghana/ February 2018

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Other sources include **bushfires**, **Harmattan** and **industry**.

The AirMask & Textiles Company identifies the **Agbogbloshie e-waste dump** as a major source of air pollution in Accra. Scrap workers at the Agbogbloshie e-waste dump regularly burn insulated copper wires, alternators, refrigerator coils, old electronic components, radial tires, etc. to recover copper, steel and other valuable metals.

This “urban mining” of rare metals at Agbogbloshie releases a cocktail of highly toxic chemicals into Accra’s air, exposing the city’s population living downwind of the smoke to serious health risks.

# WHAT ARE THE EFFECTS OF AIR POLLUTION IN GHANA?

Air pollution is a critical risk factor for non-communicable diseases (NCDs) in Ghana. Globally, air pollution is responsible for about 25% of all adult deaths from stroke, 24% from heart disease, 43% from Chronic obstructive pulmonary disease (COPD) and 29% from lung cancer, [WHO estimates show](#).

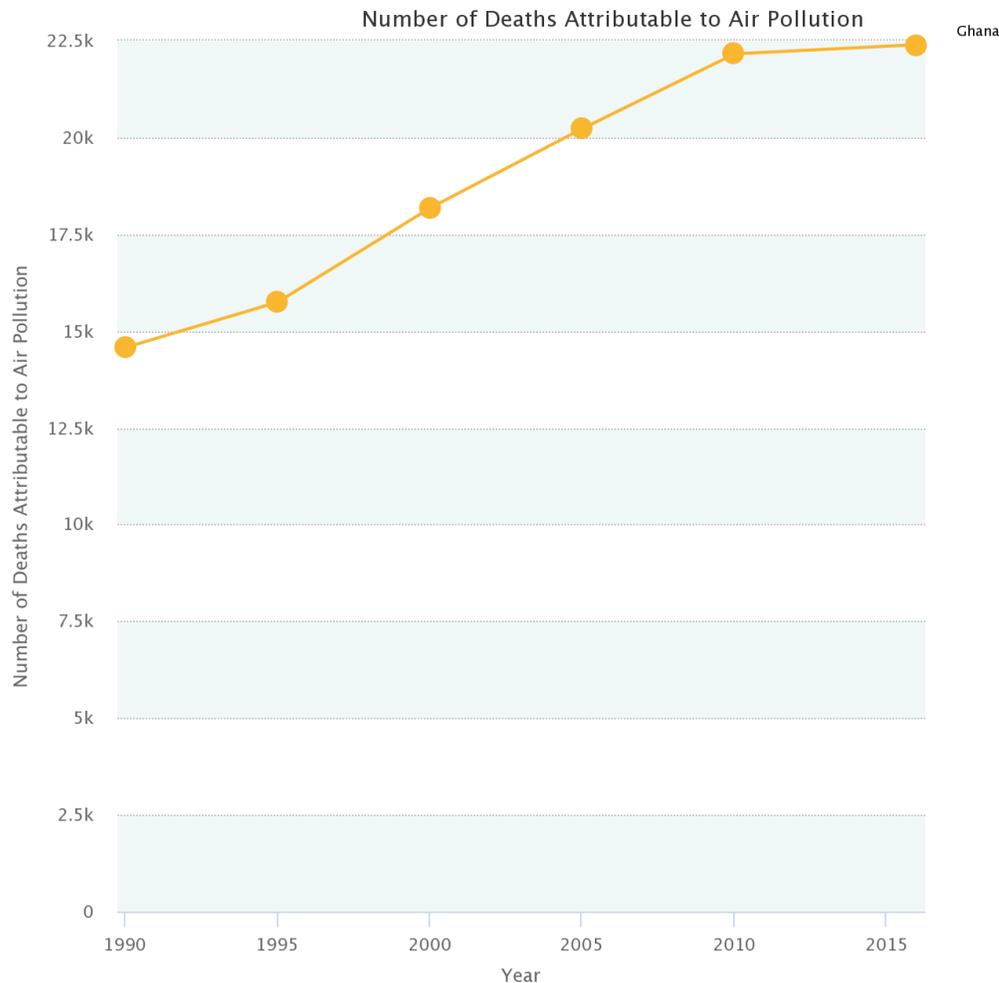
Ghana's disease burden attributable to air pollution-related deaths increased substantially between 2012 and 2016. Mortality estimate for air pollution in Ghana in 2016 was about 203<sup>5</sup> for every 100,000 people. It was 80 for every 100,000 people in 2012<sup>6</sup>.

*“The risks from air pollution are now far greater than previously thought or understood, particularly for heart disease and strokes,”* says Dr Maria Neira, Director of WHO's Department for Public Health, Environmental and Social Determinants of Health. *“Few risks have a greater impact on global health today than air pollution; the evidence signals the need for concerted action to clean up the air we all breathe.”*

These are some annual mortality estimates for Ghana:

1. Air pollution in Ghana causes about 28,000 premature deaths in Ghana every year - WHO<sup>7</sup>
2. About 22,000 premature deaths in Ghana in 2016 were due to air pollution - Health Effects Institute (HEI) and Institute for Health Metrics and Evaluations (IHME)<sup>8</sup>

## NUMBER OF DEATHS ATTRIBUTABLE TO AIR POLLUTION IN GHANA (1990-2016)



Source: [Stateofglobalair.org](http://Stateofglobalair.org)

You might expect death rates to increase when pollution levels increase. Not true in all cases. Your risk of premature death from air pollution is determined by a number of factors - the exposure level is only one of them. Your overall health, quality of life and your country's standard of healthcare, are a few critical factors.

Increased pollution exposure does not always imply increased mortality rates. Countries with poorer healthcare system generally experience increased death rates (when air pollution levels are high or even stable)

as opposed to countries with better healthcare systems (even when pollution levels are high).

This partly explains why more people die from air pollution in poorer countries than in rich economies.

Take developed countries for instance - they experience only small impact from wood-based biomass fuel, in contrast, to say SSA where majority rely on dirty solid fuels such as charcoal and wood. Where do you think more people will be dying from indoor air pollution, Canada, Ghana or Guyana?

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## **WHAT ARE SOME SOLUTIONS FOR AIR POLLUTION IN GHANA?**

**1.** Ghana's environmental laws already provide frameworks to tackle the country's dirty air problems.

Simple enforcement of existing laws, for instance, should be able to stop Korle Bu, Ghana's premier healthcare facility, from open waste burning inside their own premises and also remove vehicles which do not meet emission and efficiency standards from Ghana's streets.

**2.** Air quality assessment is critical to tackling air pollution in Ghana. Without data showing national or international air quality standards are being breached, there will be no urge for authorities to act on air pollution levels.

**3.** Ghana's EPA should regularly issue air quality alerts. This informs the public about pollution levels, especially the most vulnerable groups such as the elderly, children and those suffering from lung diseases like asthma.

3. Improved urban transit system could help reduce traffic congestion in urban areas.

4. City authorities could also consider a total ban on the most polluting cars entering city centers.

*“Excessive air pollution is often a by-product of unsustainable policies in sectors such as transport, energy, waste management and industry. In most cases, healthier strategies will also be more economical in the long term due to health-care cost savings as well as climate gains,”* says Dr Carlos Dora, WHO Coordinator for Public Health, Environmental and Social Determinants of Health.

Air pollution in Ghana cannot be deferred to tomorrow's agenda, as existing standards have failed to protect public health. Tightening pollution controls and enforcing already existing environmental laws could improve air quality and save thousands of lives every year.

Downloaded from: <https://www.atcmask.com/blogs/blog/air-pollution-in-ghana-causes-effects-solutions>

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