



# EVERY BREATH COUNTS

## AIR POLLUTION AND PNEUMONIA SCORECARD

### MAIN FINDINGS

Air pollution contributed to 30% (749,200) of all pneumonia deaths in 2019; 56% (422,800) from household and 44% (326,400) from outdoor sources

40% (304,200) of air pollution-related pneumonia deaths are among children under five years; 70% (210,400) from household air pollution

35% (263,300) of air pollution-related pneumonia deaths are among adults over 70 years; 57% (149,800) from outdoor air pollution

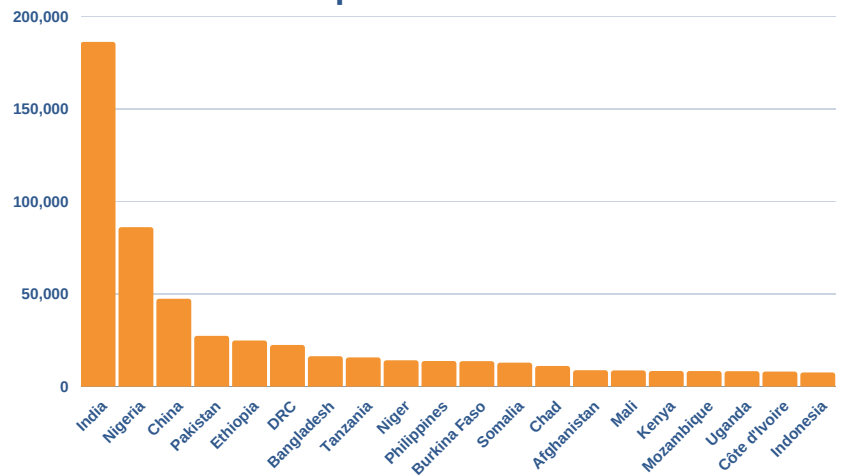
40 low- and middle-income countries (LMICs) are home to 90% (656,400) of all air pollution-related pneumonia deaths

In 17 Sub-Saharan countries air pollution contributes to more than 50% of all pneumonia deaths

Visit:

[www.stoppneumonia.org/  
everybreathcounts](http://www.stoppneumonia.org/everybreathcounts)

### 20 countries with the largest numbers of air pollution-related pneumonia deaths



Source: Global Burden of Disease 2019

Air pollution is the major risk factor for death from pneumonia and contributed to an estimated 749,200 (30%) of all pneumonia deaths in 2019, according to the Global Burden of Disease.

Household and outdoor air pollution contribute almost equally to air pollution-related pneumonia deaths, however household sources disproportionately harm children while outdoor sources disproportionately harm older adults.

Air pollution-related pneumonia deaths are concentrated in 40 low- and middle-income countries in Africa and Asia, including 17 Sub-Saharan African countries where 50% of all pneumonia deaths are attributable to air pollution, most among children.

It is critical that these 40 governments introduce policies to reduce the major causes of air pollution-related pneumonia deaths among their own populations.

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## CALL TO ACTION

**Governments should:**

**1. Set a national target to reduce air pollution-related pneumonia deaths by 50% by 2030**

**2. Introduce new measures to achieve the target including by:**

1. Increasing the proportion of households with access to clean cooking fuels and technologies to above 70%

2. Reducing average PM<sub>2.5</sub> exposure by 50% (or until it achieves the updated WHO targets of not more than 5µg/m<sup>3</sup> per year and 15 µg/m<sup>3</sup> for more than three days per year)

3. Establishing a multi-sector, multi-government Clean Air Taskforce with representation from the health, energy, agriculture, industry, and urban development ministries in national, state, and local governments

**3. Publish progress to the target as part of national health strategies using Global Burden of Disease data**

Note countries should target the leading causes of air pollution-related pneumonia deaths - household, outdoor, or both - depending on local risk factor and burden of disease analysis

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Photo by World Bank, Prabir Mallik

## AIR POLLUTION AND HEALTH GOALS, TARGETS, AND INDICATORS

### Sustainable Development Goals 2030



**3.2.1 Reduce child (0-4 yrs) deaths to at least 25 per 1,000 births**

**3.9.1 Reduce % of adult (15+ yrs) deaths attributable to PM<sub>2.5</sub> air pollution**



**7.1.2 Increase % population with access to clean fuels and technologies for cooking to 100%**



**11.6.2 Reduce annual mean levels of fine particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>) in cities (population weighted)**

## DEFINITIONS

### AIR POLLUTION

Presence of toxic chemicals or compounds (including those of biological origin) in the air at levels that pose a health risk

### HOUSEHOLD AIR POLLUTION

Array of pollutants including fine particulate matter (PM<sub>2.5</sub>), black carbon, and carbon monoxide that results from household burning of coal, charcoal, wood, agricultural residue, animal dung, and kerosene for indoor heating or cooking using open fires or cookstoves

### OUTDOOR (AMBIENT) AIR POLLUTION

Array of pollutants that result from natural and human causes including vehicle fuel combustion, heat and power generation, industrial facilities, and agricultural waste

### PNEUMONIA

Global Burden of Disease uses clinician-diagnosed pneumonia or bronchiolitis as the case definition for Lower Respiratory Infection (LRI) with major causes *Streptococcus pneumoniae*, *Haemophilus influenzae* type b, respiratory syncytial virus (RSV) and influenza

### PM<sub>2.5</sub>

Particulate matter measuring less than 2.5 micrometers in diameter (i.e., less than a 30th of the diameter of a human hair), emitted from vehicles, coal-burning power plants, industrial activities, waste burning, and many other human and natural sources, measured in concentration of an air pollutant in micrograms (one-millionth of a gram) per cubic meter of air (µg/m<sup>3</sup>).

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COUNTRY	NUMBER PNEUMONIA DEATHS ATTRIBUTABLE TO AIR POLLUTION	% ATTRIBUTABLE TO HOUSEHOLD AIR POLLUTION	% ATTRIBUTABLE TO OUTDOOR AIR POLLUTION	% DEATHS CHILDREN <5 YRS
INDIA	186,200	43%	57%	32%
NIGERIA	86,100	70%	30%	78%
CHINA	47,400	22%	78%	9%
PAKISTAN	27,300	52%	48%	70%
ETHIOPIA	24,800	89%	11%	43%
DRC	22,400	84%	16%	32%
BANGLADESH	16,300	58%	42%	33%
TANZANIA	15,700	86%	14%	52%
NIGER	14,100	90%	10%	74%
PHILIPPINES	13,700	64%	36%	18%
BURKINA FASO	13,600	88%	12%	68%
SOMALIA	12,800	97%	3%	68%
CHAD	11,000	88%	12%	71%
AFGHANISTAN	8,700	77%	23%	74%
MALI	8,600	87%	13%	77%
KENYA	8,300	82%	18%	33%
MOZAMBIQUE	8,300	93%	7%	48%
UGANDA	8,200	83%	17%	42%
CÔTE D'IVOIRE	8,000	71%	29%	53%
INDONESIA	7,500	45%	55%	21%
JAPAN	7,500	0%	100%	0%
GUINEA	7,400	85%	15%	54%
MYANMAR	7,400	68%	32%	31%
CAMEROON	7,200	54%	46%	46%
BRAZIL	6,700	24%	76%	6%
MADAGASCAR	6,600	91%	9%	42%
EGYPT	6,200	0%	100%	29%
GHANA	5,900	46%	54%	23%
THAILAND	5,300	19%	71%	1%
SOUTH AFRICA	5,000	18%	72%	14%
MALAWI	4,700	91%	9%	45%
BENIN	4,600	81%	19%	58%
CAMBODIA	4,600	81%	19%	28%
ZIMBABWE	4,600	79%	21%	36%
NEPAL	4,100	56%	44%	39%
VIET NAM	4,100	49%	51%	11%
SIERRA LEONE	4,000	83%	17%	57%
SOUTH SUDAN	4,000	85%	15%	70%
ANGOLA	3,600	61%	39%	44%
BURUNDI	3,600	91%	9%	39%

These 40 countries are home to 90% of all air pollution-related deaths from pneumonia according to the [Global Burden of Disease, 2019](#)