

**Embargoed: Not for publication before 12:00 AM, EST, Wednesday June 24<sup>th</sup> 2020**

New York, NY, June 24, 2020

## **Report Identifies The Top Five Air Pollution Actions To Improve Health And Benefit Climate.**

In a groundbreaking report released today by the Global Alliance on Health and Pollution (GAHP), AirQualityAsia and The Schiller Institute for Integrated Science and Society at Boston College, researchers evaluate 22 practical interventions undertaken to reduce air pollution. While some efforts -- namely those that replace fossil fuels with renewable energy sources -- improve both local health and favorably impact climate change, other, often politically popular programs are of limited value on either front.

*"There has been an assumption that adverse conditions impacting climate change and air pollution are the same thing. This is not necessarily true,"* says Richard Fuller, Board Chair of the Global Alliance on Health and Pollution (GAHP) and a co-author of the report. *"We wanted to see where the overlaps are, where investments can be directed that will improve health and also impact climate change."*

The report, ***Air Pollution Interventions: Seeking the Intersection Between Climate and Health***, finds that "the single most effective action to achieve co-benefits that improve health and impact climate change is to phase out the use of coal (and other fossil fuels, such as lignite and tar products) for power production."

The **Top Five** most effective interventions that improve both health, by reducing PM2.5, and climate, by reducing carbon dioxide emissions, according to the report are:

- 1) Replacing coal with renewable sources of energy for total power production;
- 2) Replacing diesel and gasoline-powered vehicles with electric vehicles in both the public and private sector;
- 3) Eliminating uncontrolled diesel emissions;
- 4) Preventing crop burning; and
- 5) Preventing forest fires.

The report's authors found that converting total power production from coal to renewable sources can be highly cost effective and fairly easy to implement, **if the changes are made when new plants are brought online**. On the other hand, the research team found that forest fire prevention, while beneficial from both health and climate standpoints, is difficult and can be costly.

*According to Rafay Alam, Esq., Advisor to AirQualityAsia, "This report underscores the importance of phasing out coal as a source of energy. The quicker this can be done the better. In Pakistan, where average life expectancy is reduced by as much as five years due to air pollution alone, the past decade has seen a significant increase in coal power - both installed and in the pipeline. This is dangerous not only for the health of the people of Pakistan, but also the future of the planet. We need to act now, and decisively."*

Other effective pollution interventions include upgrading and expanding mass transit systems, reducing sulfur content in fuel, converting coal-fired power plants to natural gas, and redesigning urban areas to promote walkable communities. The report's authors found that upgrading fuel quality, such as that required to meet EURO standards, can reduce emissions of particulate matter, nitrogen dioxide, and other pollutants detrimental to health, but has limited impact on climate change. Improved biofuel cookstoves can provide

some relief from smoke in the immediate vicinity, but are not usually adequate on their own to achieve healthy household air quality.

Specifically, researchers sought to determine:

- which interventions effectively reduce air pollution and improve health quality;
- which interventions can impact climate change; and
- which interventions can do both.

*“Global health should be our priority now,” says Mrs. Mercy Barends, MP, Indonesia and AirQualityAsia advisor. “Therefore, we should fight climate change issues together in order to save our planet, and make it a healthy, sustainable planet.”*

The report includes detailed charts and graphs, identifies common obstacles to implementing successful programs, and details efforts that have proven unsuccessful over time.

Written to assist governments and policymakers, the report takes a comprehensive and comparative look at the cost and effectiveness of a wide variety of pollution-control interventions in low- and middle-income countries (LMIC) where resources often are limited. Due to the paucity of existing data about the effectiveness of air quality interventions, researchers conducted numerous interviews with government officials, non-governmental organizations, scientists, and environmental groups to learn from their first-hand experience, which efforts to address air pollution have been successful, under what conditions, and at what cost. The team also collected extensive information on the range of interventions applied in Beijing, Mexico City, Delhi, Bangkok, Santiago, Bogota, and Sao Paulo, as well as details of measures taken in more than 25 other cities and countries.

*“If we want concrete interventions to preserve the air quality and health gains just hinted at during the COVID shutdown, this report provides it,” says Rachael Kupka, Acting Executive Director of GAHP.*

Urban air pollution is a significant concern in most low- and middle-income countries (LMICs) where in densely populated cities, high concentrations of PM<sub>2.5</sub>, particulate matter smaller than 2.5 microns, have been implicated in both acute, short-term illnesses, and in increased rates of respiratory and cardiovascular disease, asthma, pneumonia and other health problems over time. PM<sub>2.5</sub>, which is largely produced by carbon burning and emanates from power plant smokestacks, vehicle exhaust systems, and open fires, was identified as the sixth highest risk factor for death worldwide in a 2018 report by the Health Effects Institute (HEI) and the Institute for Health Metrics and Evaluation (IHME).

The World Health Organization estimates that ambient air pollution is responsible for 4.2 million deaths annually, with about 91 percent of the world's population living in places with unhealthy air quality.

Additionally, as a growing body of evidence indicates, long term exposure to air pollution may worsen outcomes for patients infected by **COVID-19**. In the early stages of the COVID-19 pandemic, cities with higher rates of air pollution also reported higher mortality rates and more severe symptoms among COVID-19 patients, according to a March 16 report by the European Public Health Alliance.

*“Climate change and air pollution are major threats to human health and economic development that must be addressed. The COVID pandemic has raised the stakes considerably,” says Dr. Phil Landrigan, Director, Global Public Health Program at Boston College. “It is essential to understand the extent to which these issues can be tackled together. Policymakers can use this report to prioritize investments that are the most effective in generating co-benefits across health and climate.”*

Exposure to air pollution can reduce lung function and increases the risk of respiratory infections and pneumonia, conditions which can significantly and adversely impact outcomes for patients infected with COVID-19, according to the U.S. Centers for Disease Control and Prevention.

Populations already at risk from air pollution's worst effects, including those who work in polluting industries with direct exposure to toxins and impoverished communities with low access to health care and education, are also more vulnerable to the most devastating health and economic impacts of COVID-19, according to the United Nations Development Programme.

On the other side of the equation, cleaner air in cities under lockdown around the globe, evidenced by satellite imagery and ground photographs, illustrates not only how significantly power plant generation and vehicular exhaust contribute to air pollution but also how quickly air quality improves with reductions in carbon burning.

***Air Pollution Interventions***, largely researched and written in 2019 before the onset of the COVID-19 pandemic, is highly prescient in its identification of both the drivers of air pollution (and ultimately climate change) and the most effective solutions available for creating cleaner air and healthier communities.

***Air Pollution Interventions*** was funded by a grant from the Clean Air Fund and produced by Global Alliance on Health and Pollution (GAHP), AirQualityAsia and The Schiller Institute for Integrated Science and Society at Boston College, with contributions from Pure Earth.

### **About GAHP**

The Global Alliance on Health and Pollution (GAHP) is a collaborative body made up of more than 60 members and dozens of observers that advocates for resources and solutions to pollution problems. In 2012, Pure Earth initiated the alliance together representatives from The World Bank, UNEP, UNDP, UNIDO, Asian Development Bank, the European Commission, Ministries of Environment and Health of many low and middle-income countries to formulate strategies to address pollution and health at scale. In 2019, GAHP incorporated as a foundation in Geneva, Switzerland. For more information, visit [www.gahp.net](http://www.gahp.net).

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