GLOBAL HEALTH PROGRAM

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1990

2016
Global Burden of Disease (GBD) Project

- Provide ongoing support for leadership of GBD outdoor air pollution workgroup
  - Refining and updating integrated exposure response functions
  - Updating global satellite measurements and estimates of PM$_{2.5}$
GBD MAPS: Global Burden of Disease from Major Air Pollution Sources

- Initiative to understand source-specific contributions to air pollution and burden
  - Current and future control scenarios

- Conducted in China and India
  - In partnership with leading Chinese, Indian investigators (Tsinghua, IIT-B, Others)

  - **China results were published August 2016**

  - **India to be published in Summer 2017**
The State of Global Air:
How Clean is the Air You Breathe?

- A new Annual Report and interactive Web Site
- Levels and trends in ambient air pollution and disease burden
- Assist government officials, NGOs, scientists, students and the public in understanding/using latest GBD results

Launched February 2017
Stateofglobalair.org

How clean is the air you breathe?
Over 90% of people globally live in areas where fine particle levels exceed global air quality guidelines.

What is the impact on your health?
Air pollution is linked to illness and early deaths, and is the fifth leading risk factor globally.

Explore the interactive data.
Explore your country’s air and health using this unique site. View trends, compare, and download data.

Read the report.
Analysis of the latest air quality and health findings for citizens, policy makers, and scientists.
State of Global Air: Display, download the data

- India
- China

Exposure Mortality
India’s Air Pollution Rivals China’s as World’s Deadliest

NEW DELHI — India’s rapidly worsening air pollution is causing about 1.1 million people to die prematurely each year and is now surpassing China’s as the deadliest in the world, a new study of global air pollution shows.

The number of premature deaths in China caused by dangerous air particles, known as fine particulate matter with a diameter of 2.5 micrometres or less, has stabilized globally in recent years but has risen sharply in India, 25 times faster than China, according to the World Health Organization. India has registered an alarming increase of 54.1 percent since 2008, while China’s has risen by a mere 2.6 percent. India’s death toll of 1.1 million each year is more than the combined total for the United States and Canada.

India is on the verge of overtaking China as the country with the world’s biggest environmental killer, according to a 2017 report by the World Bank on air pollution, the world’s biggest environmental killer, according to the Global Burden of Disease study. India is home to the world’s largest number of people who are exposed to unhealthy levels of air pollution, the study found.

The report, released in September, found that India has the highest number of people exposed to unhealthy levels of air pollution, with 420 million people living in areas with the highest levels. China has 280 million people exposed to unhealthy levels of air pollution, the study found.

In 2015 both countries suffered about 1.1 million premature deaths each year from air pollution, the US-based research group National Oceanic and Atmospheric Administration (NOAA) found. In 2016, China’s death toll rose to 1.2 million, while India’s rose to 1.1 million, the study found.

In 2017, India’s death toll rose to 1.3 million, while China’s remained at 1.2 million, the study found. In 2018, India’s death toll rose to 1.4 million, while China’s remained at 1.2 million, the study found.

The three most polluted cities in India are New Delhi, Mumbai and Kolkata, according to the study. In New Delhi, the air quality index (AQI) reaches 500 or higher, and in Mumbai, it reaches 400 or higher. In Kolkata, the AQI reaches 300 or higher, according to the study.

The study found that India’s air pollution is caused by coal-burning power plants, vehicle fumes and industrial emissions. India’s air pollution is also caused by crop burning, which releases large amounts of particulate matter into the air, the study found.

The World Bank report found that India needs to invest in cleaner energy technologies, such as wind and solar power, to reduce its air pollution. The report also found that India needs to strengthen its air pollution monitoring and control systems to reduce the number of premature deaths caused by air pollution.
HEI State of Global Air
-- Active Online Engagement on Six Continents--
China Ports Initiative

- **Health impact assessment**
  - Yangtze River Delta
  - Ocean going vessels, river ships, land transport
  - Current/Future policies for emissions controls

- **Collaborators:**
  - Fudan University, Shanghai Environmental Monitoring Center (SEMC), Shanghai Academy of Environmental Sciences (SAES)
  - Other NGOs

ECA = emissions control area
Non-communicable disease (NCD) burden from household air pollution

- Develop a communication on health burden and costs of NCD
- Convene an expert panel to explore opportunities for reducing exposure
Thanks to many!

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- HEI State of Global Air Project Team
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  - Oak Foundation
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