



## The Problem

More than 3 billion people around the world depend on food cooked over open fires and inefficient stoves, exposing them to pollution. Exposure to household air pollution (HAP) from burning wood, charcoal, coal, and kerosene is a leading risk factor for diseases, including childhood pneumonia, chronic obstructive pulmonary disorder, ischemic heart disease, stroke, and lung cancer. When pregnant women are exposed to HAP, their infants are at increased risk for stillbirth, low birthweight, and decreased lung function. Globally up to four million people die prematurely each year from illnesses attributable to HAP.

## The Solution

Replacing open fires and inefficient stoves with clean cookstoves and fuels reduces emissions and personal exposure, lowering the burden of disease associated with HAP. Research evidence suggests that significant exposure reduction is required to reduce negative health impacts. Therefore, substantial improvements in health can only be achieved with intensive, near-exclusive use of the lowest emission cookstoves and fuels. With a successful transition to clean cookstoves and fuels, randomized control trials have shown reductions in severe pneumonia in young children, reduced duration of respiratory infections in children, lower blood pressure in pregnant women, increased birth weights, and increased gestational age at delivery. Achieving these positive health outcomes necessitates a strong supply to ensure long-term access to high-quality stoves and fuels; consumer education promoting consistent and exclusive use; as well as policies to increase availability and affordability of clean cookstoves and fuels.

## Health Impacts of Cooking Emissions

- 1 The leading environmental health risk globally** is air pollution.
- 2 12% of ambient air pollution globally** comes from household air pollution, further contributing to the burden of disease.
- 3 Up to 4 million premature deaths each year** are attributable to household air pollution from cooking, lighting and heating.
- 4 Negative birth outcomes** are linked to pregnant women who cook with inefficient stoves and fuels.
- 5 400,000 children under 5 die each year,** primarily in sub-Saharan Africa and Asia, as a result of household air pollution.

## Action Priorities

- 1** Incentivize clean cooking transitions across a region or country with a conducive regulatory environment. Implement policies that encourage the use of clean stoves and fuels over other options, such as removing kerosene subsidies or reducing taxes on the highest performing products.
- 2** Change behavior with consumer-focused campaigns that emphasize the many compelling benefits of cooking with clean cookstoves and fuels, including convenience, cleanliness, and cost-savings, in addition to health.
- 3** Develop and support innovative and flexible distribution channels, payment models, and financing options so that high-quality, clean fuels are consistently accessible to consumers across the socioeconomic spectrum.
- 4** Mainstream clean cooking into public health-related global campaigns. Despite the evidence of the many negative health impacts of exposure to household air pollution, clean cooking still needs a more prominent place as a public health imperative.
- 5** Fund targeted research to strengthen the evidence-base. While there are robust findings of negative impacts on cardiovascular and respiratory health, additional targeted research is needed on the impact of cooking emissions on cognitive development and other measures of a healthy childhood.

## Clean Cooking and the SDGs

Clean Cooking and air quality are integral to the Sustainable Development Goals (SDGs):

- Reducing health impacts from household air pollution is explicitly included as part of Goal 3, **ensuring healthy lives and promoting well-being for all at all ages**.
- Increasing access to clean fuels and technology is stated in Goal 7, **ensuring access to affordable, reliable, sustainable and modern energy for all**.
- Clean cooking is essential to eight other SDGs and contributes to an enabling environment for achieving the entire Agenda 2030.

## Emerging Evidence on Additional Impacts to Children's Health

While cooking emissions and the resulting air pollution have a definitive relationship to childhood pneumonia and negative birth outcomes, recent research highlights that HAP may also increase the risk for anemia, childhood stunting, and impaired child cognitive development. While more evidence is needed to strengthen these connections, cooking emissions and HAP are already a significant risk to multiple aspects of children's health that require immediate and systemic solutions.



## About the Clean Cooking Alliance

The Clean Cooking Alliance works with a global network of partners to build an industry that makes clean cooking accessible to families around the world. Established in 2010, the Alliance supports the development, sale, distribution, and consistent use of clean cooking solutions that transform lives by improving health, protecting the environment, creating jobs, and helping consumers save time and money.

