



# Climate, Environment, and Clean Cooking

## The Problem

Globally, 2.3 billion people depend on polluting, open fires or inefficient stoves to cook their food, harming health, the climate, and the environment. Inefficient combustion of solid fuels—such as wood, charcoal, coal, crop residue, and dung—and kerosene over open fires and inefficient stoves produces a range of climate-warming gases and pollutants. Cooking this way not only releases greenhouse gases (GHGs) like carbon dioxide (CO<sub>2</sub>), but also short-lived climate pollutants (SLCPs). The most significant SLCP emitted by traditional cooking practices is black carbon, a component of particulate matter emissions. Since the atmospheric lifetime of black carbon is only a few days, reducing black carbon emissions can bring about a more rapid climate response than reductions in GHGs alone. In addition, unsustainable harvesting of wood for fuel not only contributes to forest and environmental degradation, but is a major driver of climate change.

## The Solution

Clean cooking is a proven and critical part of the climate solution. Today's highly efficient stoves can reduce fuel use by 30–60%, resulting in fewer GHG and black carbon emissions. The global community cannot reach its goal of addressing climate change without addressing the way people cook. Scaling up clean cooking can address climate change while simultaneously providing significant improvements to global health, as well as benefits to women's empowerment and local economies.

## Environmental Impacts of Cooking

- **Approx. 1 gigaton** of carbon dioxide equivalent is produced every year from burning woodfuels, equal to 1.9–2.3% of global emissions.
- **More than half** of man-made black carbon emissions come from household fuel combustion.
- Black carbon is an important contributor to climate warming. Per unit of mass, black carbon has a warming impact on climate that is **460–1,500 times stronger** than CO<sub>2</sub>.
- **Sea ice melt** is, in part, caused by black carbon emissions from cooking that end up deposited in the Arctic.
- **Up to 34%** of woodfuel harvested is unsustainable, contributing to forest degradation and climate change.
- **Over 275 million** people live in woodfuel “hotspots,” which are areas where over 50% of woodfuel harvesting is unsustainable.

## Priorities for Action

The Clean Cooking Alliance (CCA) is working through multiple avenues to promote responsible, clean cooking carbon markets, including by:

- **Providing technical guidance to governments** on attaining their clean cooking targets (as part of countries' Nationally Determined Contributions under the Paris Climate Agreement), through the CCA-led Clean Cooking and Climate Consortium
- **Updating and strengthening clean cooking carbon methodologies**, measurement, and verification systems, in coordination with a wide range of partners including the UN Framework Convention on Climate Change and Gold Standard
- **Financing companies to register for carbon programs**, while analyzing and interpreting stove and fuel emissions performance results
- **Supporting carbon project developers focused on nature-based solutions** to integrate clean cooking activities in a holistic and market-based way



## Clean Cooking and the SDGs

As the world implements the Sustainable Development Goals (SDGs) and addresses climate change, it is particularly important that we invest in proven, scalable solutions like clean cooking that bring cross-cutting and economically inclusive impacts. Clean cooking directly delivers across 10 of the SDGs, including Goal 13 on climate. Clean cooking will play a key role in delivering on the Paris Climate Agreement. To date, 98 low- and middle-income countries have included clean cooking or related goals in their Nationally Determined Contributions to reduce greenhouse gas emissions and adapt to the impacts of climate change.

## About the Clean Cooking Alliance

CCA works with a global network of partners to build an inclusive industry that makes clean cooking accessible to the 2.3 billion people who live each day without it. Established in 2010, CCA is driving consumer demand, mobilizing investment to build a pipeline of scalable businesses, and fostering an enabling environment that allows the sector to thrive. Clean cooking transforms lives by improving health, protecting the climate and the environment, empowering women, and helping consumers save time and money.

For more information, please visit CCA online at [CleanCooking.org](https://www.CleanCooking.org)

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