



# Nationally Determined Contributions and Clean Cooking

## Why action on clean cooking is critical to achieving climate goals

We cannot achieve our global climate goals without reductions in emissions from cooking. Transitioning to clean cooking reduces demand on forests, thereby reducing CO<sub>2</sub> emissions. Further, household fuel combustion is the single largest source of manmade emissions of black carbon, a powerful short-lived climate pollutant that warms the atmosphere much more quickly than CO<sub>2</sub>. Recognizing clean cooking as a critical climate solution will help to unlock the political will and financing needed to deliver clean cooking solutions at scale, and more effectively meet our climate goals.

## Clean cooking measures in Nationally Determined Contributions (NDCs)

The inclusion of clean cooking in NDCs represents significant progress in utilizing clean cooking to mitigate climate change while also taking advantage of adaptation and development co- benefits.

As of December 2023, 96 low- and middle-income countries (LMICs) have included clean cooking-specific or broader household energy measures in their NDCs (see full list on next page). Among these, 60 NDCs include one or more measures that explicitly target clean cooking, either wholly or partially (e.g., *Increase share of clean energy for cooking from 15% to 65% in 2030*). The remaining countries only include implicit clean cooking measures (e.g., *Reduce emissions by 1,100 Gg CO<sub>2</sub>e per year by increasing the efficiency of charcoal production and use by 2030*) or broad household energy measures that could apply to either cooking, lighting, and/or heating (e.g., *Achieve 19% reduction in emissions from the energy sector by 2030 by using energy-efficient appliances in households*).

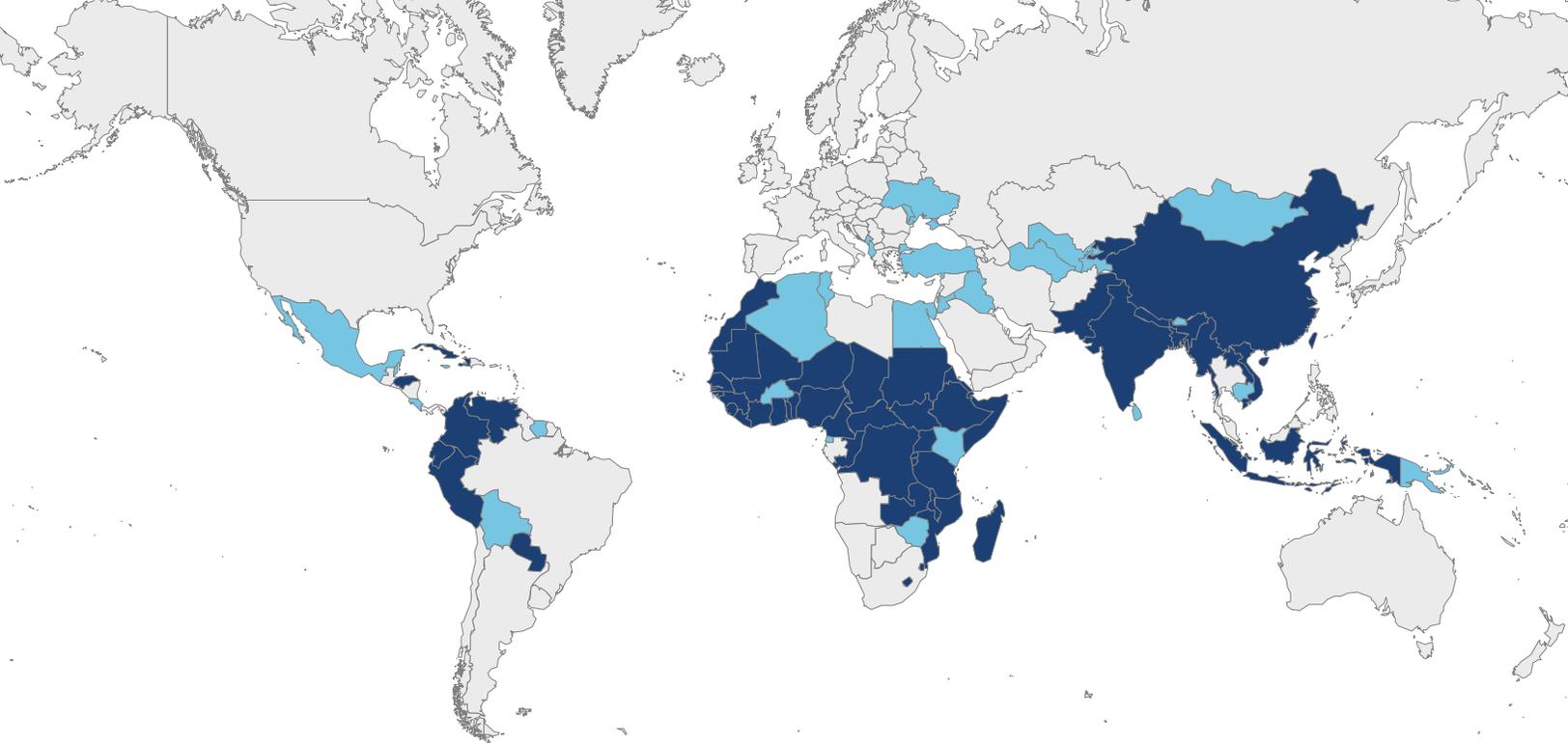
## Climate impacts of cooking

- Greenhouse gas emissions from non-renewable woodfuels for cooking amount to a gigaton of CO<sub>2</sub>e per year, representing about **2% of global emissions**, on par with emissions from aviation or shipping
- **>50% of anthropogenic black carbon emissions** come from household energy use
- **27–34% of woodfuel** harvested globally for all uses is unsustainable
- High-efficiency stoves can achieve a **30–60% reduction in fuel use**

## Examples of clean cooking targets in NDCs

**Nepal:** "By 2030, ensure 50% of households use electric stoves as their primary mode of cooking." 

**Rwanda:** "Dissemination of modern efficient cookstoves to 80% of the rural population and 50% of the urban population by 2030." 



## The Clean Cooking and Climate Consortium (4C) applauds the 96 LMICs\* that have included clean cooking or related goals in their NDCs

- |                      |                    |                   |                      |                |
|----------------------|--------------------|-------------------|----------------------|----------------|
| ■ Albania            | ■ Cote d'Ivoire    | ■ Jordan          | ■ Nepal              | ■ Tanzania     |
| ■ Algeria            | ■ Cuba             | ■ Kenya           | ■ Niger              | ■ Timor-Leste  |
| ■ Bangladesh         | ■ Djibouti         | ■ Kiribati        | ■ Nigeria            | ■ Togo         |
| ■ Belize             | ■ Dominica         | ■ Kyrgyz Republic | ■ Pakistan           | ■ Tonga        |
| ■ Benin              | ■ Ecuador          | ■ Lao PDR         | ■ Palau              | ■ Tunisia      |
| ■ Bhutan             | ■ Egypt            | ■ Lesotho         | ■ Papua New G.       | ■ Turkiye      |
| ■ Bolivia            | ■ Equatorial Guin. | ■ Liberia         | ■ Paraguay           | ■ Turkmenistan |
| ■ Burkina Faso       | ■ Eritrea          | ■ Madagascar      | ■ Peru               | ■ Tuvalu       |
| ■ Burundi            | ■ Eswatini         | ■ Malawi          | ■ Rwanda             | ■ Uganda       |
| ■ Cabo Verde         | ■ Ethiopia         | ■ Mali            | ■ Senegal            | ■ Ukraine      |
| ■ Cambodia           | ■ Gambia, The      | ■ Mauritania      | ■ Sierra Leone       | ■ Uzbekistan   |
| ■ Cameroon           | ■ Ghana            | ■ Mauritius       | ■ Solomon Islands    | ■ Vanuatu      |
| ■ Central African R. | ■ Guinea           | ■ Mexico          | ■ Somalia            | ■ Venezuela    |
| ■ Chad               | ■ Guinea-Bissau    | ■ Micronesia      | ■ South Sudan        | ■ Vietnam      |
| ■ China              | ■ Haiti            | ■ Moldova         | ■ Sri Lanka          | ■ Zambia       |
| ■ Colombia           | ■ Honduras         | ■ Mongolia        | ■ St Lucia           | ■ Zimbabwe     |
| ■ Comoros            | ■ India            | ■ Montenegro      | ■ St Vin. and the G. |                |
| ■ Congo, D.R (DRC)   | ■ Indonesia        | ■ Morocco         | ■ Sudan              |                |
| ■ Congo, Rep.        | ■ Iraq             | ■ Mozambique      | ■ Suriname           |                |
| ■ Costa Rica         | ■ Jamaica          | ■ Myanmar         | ■ Tajikistan         |                |

\*as of December 2023

This preliminary analysis was conducted by 4C. It is based solely on each country's NDC, and does not consider other wider policies at the national level unless expressly referenced in the NDC. If you know of a country that has clean cooking or related measures in their NDC and is not listed here, please contact us at [climate@cleancooking.org](mailto:climate@cleancooking.org).

This analysis does not aim to evaluate the comprehensive level of detail or quality of the NDC measures. Even if a country is marked as including an explicit clean cooking NDC measure, this does not necessarily mean that the measure is comprehensive, achievable, and verifiable. The amount of detail that countries provide at the clean cooking level varies significantly; some countries include broad goals without detail, while others provide specific targets and technologies, costs of implementation, expected emissions reduction potential, conditionality, and more.

If you are interested in obtaining a copy of this analysis, including methodological details, please feel free to reach out via email to [climate@cleancooking.org](mailto:climate@cleancooking.org).

## About the Clean Cooking and Climate Consortium

Founded in 2021 and led by the Clean Cooking Alliance (CCA), the Clean Cooking & Climate Consortium (4C) is a group of partners supporting efforts to achieve climate goals through clean cooking interventions. In addition to CCA, 4C members include the United Nations Framework Convention on Climate Change (UNFCCC) secretariat, the United States Environmental Protection Agency (U.S. EPA), the Climate and Clean Air Coalition (CCAC), Berkeley Air Monitoring Group (Berkeley Air), and Stockholm Environment Institute (SEI).

## How can countries and other stakeholders access support in achieving climate goals through clean cooking?

In conjunction with CCA's Innovative Finance Initiative, 4C provides a holistic suite of technical support to country governments to facilitate the implementation and measurement, reporting, and verification (MRV) of NDC-related clean cooking goals; as well as the evaluation of clean cooking carbon projects and associated claims. 4C provides this support at multiple levels, including through webinars and guidance documents (see right), multi-country expert consultations that our partners request, in-depth country-specific technical consultations, including for the development of MRV plans and funding proposals, and technical advising on carbon standards and methodologies.

4C also works with non-country stakeholders, including researchers, project developers, rating agencies, validation and verification bodies, corporate carbon credit buyers, and carbon standard bodies to improve the policies, standards, and methodologies on which the clean cooking carbon market is based, helping climate-funded clean cooking programs become more reliable, accessible, and transparent.

For more information, please visit [4C online](https://4c.org) or email [climate@cleancooking.org](mailto:climate@cleancooking.org).

## 4C has released two guidance documents as part of its initial offerings

### Clean Cooking for Climate Action: Roadmap for National Clean Cooking Programs to Achieve Emission Reduction Targets.



This document provides an overview of the benefits of and new opportunities for clean cooking transitions. It is intended to help governments and other stakeholders initiate, expand, or enhance clean cooking initiatives with the goal of reducing harmful climate-forcing emissions and supporting their commitments under the Paris Agreement.

### Introductory Framework for Measuring, Reporting, and Verification for Clean Cooking Energy Initiatives:



**Clean Cooking MRV in the Paris Context.** This document introduces measurement, reporting, and verification (MRV) approaches and recommendations as they apply to cooking energy interventions. The document builds on existing MRV experience and highlights how these approaches may evolve in the context of the Paris Agreement. This guide is intended for any professional involved in the planning, execution, or funding of clean cooking projects that aim to reduce climate-harming emissions, within the context of the Paris Agreement goals.

