

EFFICIENT, CLEAN COOKING AND HEATING PROGRAM



AN ESMAP SUSTAINABLE ENERGY FOR ALL PARTNERSHIP

Almost three billion people worldwide use solid fuels including wood, charcoal, coal, animal dung, and crop waste in open fires and traditional stoves as the primary source of cooking and heating energy in Asia, Sub-Saharan Africa, Central America, and Eastern Europe.

The significant public health impact of cooking and heating with solid fuels and traditional stoves is well established. The World Health Organization estimates that 4.3 million deaths a year—more than AIDS, malaria, and tuberculosis combined—are attributed to diseases associated with emissions from cooking and heating with solid fuels in traditional stoves. Millions more are sickened from lung and heart diseases. Women, girls, and young children are most at risk, as they typically tend to the family meals.

Where fuel must be purchased, the costs place a burden on poor households. Time and drudgery spent collecting fuel is wasted human capital. Unsustainable harvesting of biomass can lead to degradation of landscapes and contribute to net greenhouse gas emissions. And certain components of particulate matter are a powerful climate change forcing agent due to their heat absorption characteristics.

The cost of reliance on inefficient and polluting fuels and cooking and heating stoves is enormous. A recent assessment estimates the economic value of the health, environmental, and economic effects of solid fuel dependence at between US\$22 billion and US\$224 billion annually.



Addressing the lack of access to clean and efficient cooking and heating options is core to achieving the Post-2015 Sustainable Development Goals, the Sustainable Energy for All's 2030 universal access goal, and the World Bank Group's (WBG) mission of ending extreme poverty and promoting shared prosperity.

THE TIME IS RIGHT TO SCALE UP ACCESS TO CLEANER AND MORE EFFICIENT COOKING & HEATING SOLUTIONS

Recent developments highlight the potential to transform the sector:

- Cutting-edge scientific knowledge on the links between emissions and health and climate impacts
- New technologies that significantly reduce emissions



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The Energy Sector Management Assistance Program (ESMAP) is a global knowledge and technical assistance program administered by the World Bank. It provides analytical and advisory services to low- and middle-income countries to increase their know-how and institutional capacity to achieve environmentally sustainable energy solutions for poverty reduction and economic growth. ESMAP is funded by Australia, Austria, Denmark, Finland, France, Germany, Iceland, Lithuania, the Netherlands, Norway, Sweden, and the United Kingdom, as well as the World Bank.

- Improved communication and behavior-change efforts to accelerate adoption
- Emerging remote monitoring and sensing technologies (e.g., for stove use, indoor air quality, personal exposure)
- Growing private sector engagement
- Increased focus on women's roles as consumers, entrepreneurs, and drivers of clean and efficient cooking solutions
- Recognition of developing country governments of the development and economic case for addressing the lack of access to clean, efficient cooking and heating

ESMAP has launched **the Efficient, Clean Cooking and Heating Program**, a collaboration between the Energy, Environment, Health, Gender, and Climate Change teams of the World Bank and IFC, the objective of which is to support countries increase access to cleaner, more efficient cooking and heating solutions.

STRATEGIC PILLARS

Health & Cooking and Heating Nexus | deepen knowledge on the health impact resulting from cooking and heating emissions and support lab and field testing of equipment and methodologies for a reliable estimation of health impacts

User-Centric Products and Delivery at Scale | catalytic activities in the area of understanding consumer needs and preferences, product innovation, behavior change; improving supply chains, business models, and the sector environment for delivery at scale.

Mobilizing Finance | particularly, international private and public sector resources (e.g., climate change, public health, environment, energy access, etc.)

Operationalizing Support | guidance and technical support to WBG operational teams for project identification and preparation, including pre-feasibility assessments for testing of scalable approaches

The program has been designed to build toward achieving health benefits, while recognizing that approaches and technologies that primarily increase efficiency are still valuable for market and supply chain development, laying the pathway for more advanced technologies and business models. Gender considerations will be included throughout the program, taking into account the perspectives, roles, voice, and agency of both men and women.

RECENT ENGAGEMENTS

Recent WBG engagements are increasingly focusing on social and private enterprise-led supply and delivery, with government as a facilitator, supporting the development of sustainable and scalable business models, and a strong emphasis on understanding user needs and preferences, monitoring, and reporting of performance and impact.

Currently, the program is supporting five ongoing projects—in China, Indonesia, Lao PDR, and Kyrgyzstan, as well as the Central America Clean Cooking Initiative—with more to be supported in the subsequent years.