



# EFFICIENT, CLEAN COOKING AND HEATING PROGRAM

An ESMAP/Sustainable Energy for All Partnership



Nearly 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 energy source for cooking and heating 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. According to recent reports from the World Bank and the World Health Organization, household air pollution from solid fuel emissions kills between 3 and 4 million people every year—more than malaria and tuberculosis combined. Millions more are sickened from lung and heart diseases, and women and children are disproportionately affected by health impacts, since they bear much of the burden of collecting firewood or other traditional fuels. There is also evidence linking household air pollution with low birthweight, stunting, and early childhood development problems.

## ECONOMIC IMPACTS

Where fuel must be purchased, relatively high fuel costs place a financial burden on poor families. Unsustainable harvesting of biomass can lead to degradation of landscapes and contribute to net greenhouse gas emissions. Additionally, certain components of particulate matter emitted through poor combustion of biomass fuels are powerful contributors to climate change.

The cost of reliance on inefficient 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 US\$123 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 twin goals of ending extreme poverty and promoting shared prosperity.

## THE TIME IS RIGHT TO SCALE UP ACCESS TO CLEANER, MORE EFFICIENT SOLUTIONS

Recent developments highlight the potential to transform the sector:

- Expanding scientific knowledge on the links between emissions, climate, health, and social impacts
- New technologies that significantly reduce emissions
- 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
- Growing recognition by governments of the development and economic case for access to clean, efficient cooking and heating



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, the European Commission, Finland, France, Germany, Iceland, Japan, Lithuania, the Netherlands, Norway, Sweden, Switzerland, and the United Kingdom, as well as The World Bank.

In 2015, Energy Sector Management Assistance Program (**ESMAP**) launched the **Efficient, Clean Cooking and Heating Program (ECCH)**, a cross-sectoral 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.

ECCH builds towards achieving health benefits, while recognizing that approaches and technologies which have a primary benefit of increasing efficiency (rather than a significant effect on reducing harmful emissions) are still valuable for market and supply chain development,

laying the pathway for more advanced technologies and business models. Gender considerations are included throughout the program, taking into account the perspectives, roles, voice, and agency of both men and women.

## COUNTRY ENGAGEMENT AND PIPELINE DEVELOPMENT

**Initial Engagement** | Market assessments, policy dialogue, and identifying opportunities for engagement

**Pilot and Project Preparation** | Testing scalable approaches in business development and consumer financing, consumer acceptance trials, baseline and field testing, etc., for informing project preparation and design of larger lending operations in the sector

**Operational Support to Country Teams** | Guidance and technical support to World Bank Group operational teams, especially in the areas of behavior change and gender

**Mobilizing Finance and Private Sector Engagement** | Mobilize public funding and private sector financing, innovation and risk-taking through a results-based financing approach to quantify climate, health, and gender

impact-level results and monetizing these outcomes, while also drawing from existing funding sources such as the Green Climate Fund and the health-focused Global Financing Facility

**Global Knowledge Products and Knowledge Exchange** | Cross-sectoral and cross-country learning, solutions, communications, publications, and engagement in international forums

## RECENT ENGAGEMENTS

Recent World Bank Group engagements are increasingly focused 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.

In addition to ESMAP support for regional cooking and heating programs in Sub-Saharan Africa, East Asia and the Pacific, and Central America regions, and individual country programs in Nepal and India, the ECCH program is supporting activities in China, Indonesia, Lao PDR, Kyrgyzstan,

Tajikistan, Uganda, as well as the Central America Clean Cooking Initiative—with more to be supported in the subsequent years. Likewise, a key ECCH priority is to facilitate pipeline growth through the results-based financing approach being developed in conjunction with stakeholders.