



BURNING OPPORTUNITY:

Clean Household Energy
for Health, Sustainable
Development, and Wellbeing of
Women and Children

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Cover photo: SEWA, the Self Employed Women's Association, helps women learn to build and repair solar lanterns in areas where no electricity exists, India (Credit: Annie Griffiths/National Geographic Creative/Corbis)

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Abbreviations

ABPP	Africa Biogas Partnership Programme
ALRI	acute lower respiratory infection
AFR	African Region
AMR	Region of the Americas
BSP	Biogas Sector Partnership
CCAC	Climate and Clean Air Coalition
COPD	chronic obstructive pulmonary disease
DFID	Department for International Development
DHS	Demographic and Health Surveys (USAID)
EMR	Eastern Mediterranean Region
EUR	European Region
GACC	Global Alliance for Clean Cookstoves
GAPPD	Global Action Plan for the Prevention and Control of Pneumonia and Diarrhoea
GNI	gross national income
GTF	Global Tracking Framework
HAP	household air pollution
HFC	hydrofluorocarbon
IARC	International Agency for Research on Cancer
IAEG	Intra-Agency Expert Group
IAQ	indoor air quality
IEA	International Energy Agency
IFC	International Finance Corporation
IPUMS	Integrated Public Use Microdata Series
ISO	International Organization for Standardization
LMICs	low- and middle-income countries
LPG	liquefied petroleum gas
LSMS	Living Standard and Measurement Survey (World Bank)
MDG	Millennium Development Goal
MICS	Multi-Cluster Indicator Survey (UNICEF)
NCD	noncommunicable diseases
PM	particulate matter
PNG	piped natural gas
RCT	randomized controlled trial
SDG	Sustainable Development Goal
SEAR	South-East Asia Region
SE4All	Sustainable Energy For All Initiative
SLCP	short lived climate pollutant
SSA	sub-Saharan Africa
SE4ALL	Sustainable Energy for All
UN	United Nations
UNICEF	United Nations Children's Fund
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
USAID	United States Agency for International Development
VOC	volatile organic compound
WHA	World Health Assembly
WHO	World Health Organization
WHS	World Health Survey
WPR	Western Pacific Region

Foreword

Today, more than 3 billion people worldwide rely on polluting energy sources such as wood, dung and charcoal for cooking. Almost 1 billion rely on kerosene lamps and other polluting devices to light their homes.

The health implications of this are terrible. Women inhale thick smoke for hours on end as they prepare meals for their families and tend fires to keep the home warm. Children, the elderly and other vulnerable people also suffer disproportionately because, like women, they spend more time in the home than men. In 2012, more than 60% of all premature deaths from household air pollution were among women and children.

It is imperative these people have the opportunity to replace polluting fuels with clean sources of household energy. Not only will this benefit their health, it will also advance sustainable development and reduce the emission of climate-affecting greenhouse gases.

Unfortunately, progress towards this goal is currently far too slow. As this report highlights, the use of polluting fuels and inefficient energy devices in the home is actually more widespread than previously estimated, with even greater health impacts. For the first time, the authors take account of the health risks from the use of kerosene, which is a highly polluting fuel.

They also present new data on the time-consuming and back-breaking work required to gather fuel. Most of it is performed by women and children, who in the process are exposed to the risk of injury and violence. Girls in households that cook with polluting fuels were found to spend 18 hours a week on average gathering fuel compared to five hours a week in those that use clean fuels – time that could be spent in education or at play.

The health inequities that result from household air pollution are stark and tragic. It causes almost half a million of women's deaths each year from chronic obstructive pulmonary disease, while many more die from other noncommunicable diseases related to household smoke. Half a million children under five die each year from pneumonia caused by exposure to household air pollution. These women and children are killed by the everyday act of breathing, in what should be the "safety" of their own homes.

These facts are a call to action for the global community, because household air pollution signals a missed opportunity on a vast scale – an enormous amount of human potential lost to illness, injury, drudgery and premature death. By replacing polluting fuels with clean sources of energy in their homes, people can lead more healthy, productive lives. Clean fuels will allow them to meet their basic needs of cooking, heating and lighting, while also creating and maintaining a safe living environment.

Sustainable Development Goal 7 calls for universal access to "affordable, reliable, sustainable and modern energy" by 2030, ending energy poverty that prevents almost half of humanity from reaching its full potential. By expanding access to clean household energy, at affordable prices, the global community can improve the health and well-being of billions. In parallel this will advance the sustainable development agenda by creating healthy urban environments, fighting climate change and enabling equity and gender equality.

To achieve these ends we need more comprehensive data on heating, lighting and other energy uses, and more gender-sensitive surveys and programme design to better understand how women and girls are affected. We need better insights into why people decide to use different types of household energy, and how access to clean energy can benefit all members of the household. Dramatically increased investment and strategic cooperation across sectors are required to make clean fuels more available and to make existing fuels cleaner (such as wood, charcoal and other biomass).

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