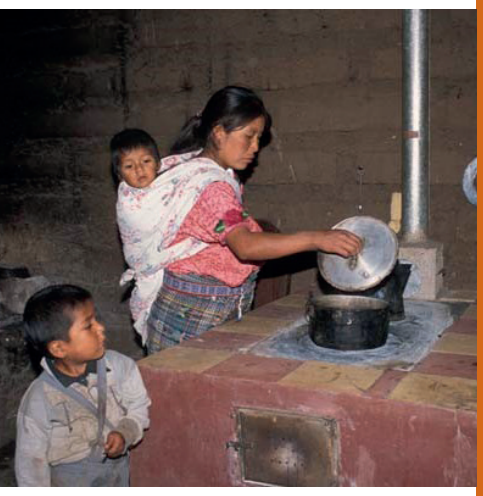

LSMS GUIDEBOOK
October 2021

Measuring Energy Access

A Guide to Collecting Data Using 'The Core Questions on Household Energy Use'

LSMS Living Standards Measurement Study
ESMAP
WORLD BANK GROUP
World Health Organization

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A Guide to Collecting Data Using 'The Core Questions on Household Energy Use'

Prepared by
The World Bank and the World Health Organization (WHO)

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ABOUT LSMS

The Living Standards Measurement Study (LSMS), a survey program housed within the World Bank's Development Data Group, provides technical assistance to national statistical offices in the design and implementation of multi-topic household surveys. Since its inception in the early 1980s, the LSMS program has worked with dozens of statistical offices around the world, generating high-quality data, developing innovative technologies and improved survey methodologies, and building technical capacity. The LSMS team also provides technical support across the World Bank in the design and implementation of household surveys and in the measurement and monitoring of poverty.

ABOUT THIS SERIES

The LSMS Guidebook series offers information on best practices related to survey design and implementation. While the Guidebooks differ in scope, length, and style, they share a common objective: to provide statistical agencies, researchers, and practitioners with rigorous yet practical guidance on a range of issues related to designing and fielding high-quality household surveys. The series draws on experience accumulated from decades of LSMS survey implementation, the expertise of LSMS staff and other survey experts, and new research using LSMS data and methodological validation studies.

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ABBREVIATIONS AND ACRONYMS

CO	Carbon monoxide
DECPM	Development Data Group's Data Production and Methods Unit
EEA	European Environment Agency
ESMAP	Energy Sector Management Assistance Program
HAP	Household Air Pollution
IEA	International Energy Agency
kWh	Kilowatt-hour
LPG	Liquid petroleum gas
LSMS	Living Standards Measurement Study
MICS	Multiple Indicator Cluster Survey
MTF	Multi-Tier Framework
NGO	Non-Governmental Organization
PAHO	Pan American Health Organization
SDGs	Sustainable Development Goals
SEforALL	Sustainable Energy for All
UN	United Nations
UNDP	United Nations Development Program
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

EXECUTIVE SUMMARY

Energy access, characterized by access to electricity and clean household energy services, is a critical determinant of growth and development. Energy usage permeates the lives of individuals in many ways, such as lighting, cooking, and communication, to name just a few. As such, any deficit in energy access will likely have a significant impact on welfare, as recognized by Sustainable Development Goal (SDG) 7, which calls for access to affordable, reliable, sustainable and modern energy for all. Access to electricity and clean household energy has the added benefit of catalyzing actions geared towards meeting the other SDGs, including poverty eradication, gender equality, mitigation of and adaptation to climate change, food security, health, education, sustainable cities and communities, clean water and sanitation, jobs, innovation, and transport.

Energy access impacts the lives of individuals and communities in myriad ways. Reliable electricity supply can enhance economic activities within a household, resulting in improved household and individual wellbeing. Reliable access to electricity in the evening can lead to improvements in educational outcomes, as lighting aids studying, and thereby learning. Clean cooking solutions play a major role in improving global health outcomes by minimizing household air pollution and its harmful impact on health. Studies have shown that reliance on traditional polluting stoves negatively impacts socioeconomic development, gender equality, education, and climate; clean cooking solutions help to reduce these impacts.

Energy modules in multi-topic household surveys typically include only broad questions on household access to a national electricity grid and the main cooking fuel used by the household. In our review of 78 household surveys in low-income and lower-middle-income countries, only a third collected information about the main source of energy used for lighting the dwelling. Moreover, less than eight percent of the surveys collected information about household expenditures on electricity (Appendix 5). The oversimplified questions in these surveys do not take into account other variables of energy access, such as the use of multiple fuels and devices, varying levels of access and use, quality and safety of the energy source, or the importance of other household energy activities (such as space heating and lighting).

Tracking progress towards Sustainable Development Goal 7.1 to "ensure universal access to affordable, reliable, and modern energy services" provides a unique opportunity for understanding energy access and its impacts. SDG 7.1 consists of two indicators: 7.1.1 "Proportion of population with access to electricity" and 7.1.2 "Proportion of population with primary reliance on clean fuels and technology".

To track these indicators and in response to the key recommendation from the UN High-Level Dialogue on Energy for improved availability and quality of energy data, a household energy access questionnaire, the Core Questions on Household Energy Use (Appendix 1), has been developed by the World Health Orga-