

*Scaling-Up Access
to Clean Cooking
Technologies and Fuels
in Sub-Saharan Africa*



THE WORLD BANK



THE CHALLENGE OF CLEANER COOKING

Over the last decade, in a growing number of developing countries, there has been a welcome shift toward the use of more clean and sustainable cooking technologies and fuels, away from the traditional practice of cooking over smoky open fires. In Sub-Saharan Africa (SSA), however, over 82% of the population (~700 million people) remains dependent on solid fuels such as charcoal, dung, fuelwood, and other biomass for cooking purposes—and this number is projected to increase to 900 million by 2030.

What are the Issues?

Through decades of research and emerging evidence, we know that use of solid fuels with inefficient cookstoves adversely impacts human health, pollutes the environment, and slows socio-economic development.

Health

Exposure to indoor air pollution from incomplete combustion of biomass fuel accounts for nearly 500,000 premature deaths annually in SSA and contributes to the global disease burden.

Environment

Unsustainable use of solid biomass for cooking contributes to forest degradation and loss of forest cover around urban areas. Furthermore, inefficient burning of biomass for cooking contributes significantly to GHG emissions.

Social

Women and girls, who have primary responsibility for cooking, spend hours each week collecting fuelwood. This translates into lost opportunities for increasing income, gaining education, and makes them subject to safety and security hazards.

Change is in the Air

The clean cooking sector is currently at a transformative stage—and the opportunity to make positive, visible and durable impacts is ripe due to the coming together of several trends:

New Technologies	▶ Availability of fuel efficient cookstoves with lower emissions; emergence of alternative and efficient biomass fuel production technologies.
Private Sector Interest	▶ Innovative business models, growing market potential.
Financing	▶ New carbon financing opportunities.
Global Momentum	▶ United Nations Sustainable Energy For All initiative and Global Alliance for Clean Cookstoves.

“The improved firewood stove is a savior (in Kiswahili, Mkombozi) of women, I now collect firewood once a week instead of three times a week... I now have more time...”

Ms. Asia Makumu, Tanzania



WORLD BANK'S STRATEGIC VISION FOR THE SECTOR

The World Bank works along the entire energy value chain—including generation, transmission, and distribution as well as support for off-grid solutions. The World Bank is committed to reducing energy poverty across Sub-Saharan Africa with a focus on energy access, security, and supply as key factors to bolster economic competitiveness, boost job growth, and improve human well-being.

Globally, the World Bank shares the commitment of nations—including 25 in SSA—that have joined to achieve the goals of the United Nations Sustainable Energy For All Initiative including access to modern technologies and cleaner fuels for cooking.

AFRICA CLEAN COOKING ENERGY SOLUTIONS

To address Africa's long standing energy challenge and build on new opportunities for transforming the cooking sector, the World Bank is launching the **Africa Clean Cooking Energy Solutions (ACCES)** initiative. ACCES aims to promote enterprise-based, large-scale dissemination and adoption of clean cooking solutions in Sub-Saharan Africa (SSA). By increasing access to modern technologies and cleaner fuels, the initiative seeks to alleviate the adverse health, environment, and socio-economic impacts of traditional cooking practices in SSA. ACCES' vision is to scale up clean cooking and fuel technologies through a **consultative, integrated, enterprise-based** approach to regional development. This new initiative builds on experiences and lessons learned from donor, government, public and private investments in clean cooking solutions and the World Bank's own operations, comprehensive analytical work, as well as, the Lighting Africa off-grid lighting market-transformation program.

Together, the World Bank's Africa Energy Group (AFTEG) and the Energy Sector Management Assistance Program (ESMAP) will work to implement ACCES in close coordination and through a strategic partnership with the Global Alliance for Clean Cookstoves (the Alliance), and Sustainable Energy For All (SEFA).

ACCES Principles of Engagement

ACCES seeks a consultative approach to its engagement in the clean cooking sector guided by the following key principles:

- Catalyze sector development through promotion of enterprise-based approaches.
- Promote differentiated strategies to make clean fuels and technologies accessible and affordable.
- Maintain a technology and fuel neutral platform, promoting efficient biomass stoves while supporting the transition to clean fuels.
- Integrate gender considerations into clean cooking strategies and interventions.
- Align with and build on existing country strategies, programs and partnerships.

The Origin of the ACCES Initiative

The development of ACCES was informed by a number of strategic activities:

Regional Stakeholder Consultations in East, West and Southern Africa	<ul style="list-style-type: none">▶ 130+ stakeholders across 26 countries were consulted to obtain feedback on barriers, and to expansion of the clean cooking sector and new opportunities for greater impact.▶ Stakeholders included governments; the private sector; civil society groups; research and academia; and donors and partners.
"State of the Clean Cooking Sector" Landscape Analysis:	<ul style="list-style-type: none">▶ Study analyzing fuel use and trends, cookstove technologies and penetration, markets and business models; mapping of sector stakeholders and programs; analyzing barriers and recommending targeted intervention approaches to enhance clean cooking technologies.▶ Interviews, consultations, desk research, and surveys.



"ACCES is an exciting initiative that complements our other activities in Africa. Cleaner cooking can save lives and improve living conditions, especially for women and girls."

Meike van Ginneke, Sector Manager for Energy, West and Central Africa, The World Bank

"What we need is an approach that is not top down and that is holistic."

Participant, Southern Africa ACCES Stakeholder Consultation

"The emergence of enterprise-based solutions across the clean cooking value chain is challenging the status quo and driving innovation in cookstove and fuel design, distribution, and financing."

State of the Clean Cooking Sector in Sub-Saharan Africa (2012)

ACCES FRAMEWORK FOR SECTOR SUPPORT

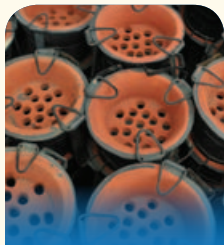
Based on the regional Stakeholder Consultations and Landscape Analysis, ACCES developed an open, adaptable framework of support.

The ACCES framework embodies a comprehensive, integrated approach to address key barriers to sector development targeting *consumers, enterprises, technology, and policy*.

Supporting Pillars

- Quality Assurance and Technical Support
- Consumer Engagement
- Business Development
- Access to Finance
- Policy Engagement

In addition, **Knowledge Management** encapsulates various knowledge generation, dissemination, communications and knowledge exchange activities specifically related to the pillars as well as those undertaken for broad sector engagement.



Quality Assurance and Technical Support

- QA-standards, testing (lab and field)
- Technology improvements (efficient/ alternative biomass fuel production and stoves)
- User-centered design for stoves



Consumer Engagement

- Sector wide awareness and education on cleaner fuels and appliances
- Consumer engagement in design and product development
- Demos/ marketplaces to promote adoption



Business Development

- MSME capacity building and training
- Business development support, Distribution channels and Marketing
- Technology transfer and partnerships



Access to Finance

- Vendor finance/ working capital
- Pipeline for investments, consumer financing, capacity building for financial intermediaries (banks, MFIs)
- Access carbon finance



Policy Engagement

- Sector policy
- Biomass and Energy access strategies
- Regulatory environment-taxes, import duties, VAT, etc; sustainable fuel supply programs and policies

Knowledge Management (Market Analytics, Communications, Exchange)

COUNTRY ENGAGEMENT

Broadly guided by the ACCES framework, our engagement with client countries will focus on key interventions that are determined through a consultative process and reflect a particular country's context, needs and priorities of sector development.

To demonstrate the efficacy of the enterprise-based approach, ACCES aims to develop a pipeline of projects with a view to supporting differentiated strategies to make appropriate technologies and fuels accessible and affordable to various segments of the population, particularly the rural poor. Furthermore, existing efforts to reach under-served populations would also be strengthened via enterprise-based approaches to increase sustainability and boost long-term sector development.

Next Steps

The time for action is now, the ACCES initiative is committed to supporting the dissemination and adoption of clean cooking technologies and fuel with a view to increasing access, reducing poverty, and improving human well-being. In terms of next steps, ACCES aims to achieve the following milestones:

- In FY2013, undertake country-level consultations, assemble market intelligence, and sector assessments in the initial countries of engagement and prepare the groundwork for implementation.
- Through FY2013-14, begin phased implementation of ACCES activities including establishing the relevant supporting pillars in the countries and operationalizing support to enterprises, promoters, consumers, and policy makers.
- Subsequently, scale-up and replicate the initiative across the African continent while incorporating lessons learned from the initial engagement.



"Firewood and charcoal have become much harder to come by, because land is being converted to other uses as more people arrive into the area."

Ally Sudi, local Tanzanian farmer

"...This technology that has made our kitchen much safer for the children...with the improved stove, we have never again experienced incidences of children falling and burning in the fire place..."

Ms. Odilia Chilumba, Center Coordinator, Tanzania (World Bank project)

"Better stove technology can lead to better combustion of fuels, and hence helps reduce local outdoor air pollution and international climate impacts."

Dr. Kirk Smith, University of California, Berkeley

"Cookstove smoke kills 1 person every 16 seconds—almost half the world's population still cooks food, boils water, and warms their homes by burning wood, animal and agricultural waste, and coal in open fires or rudimentary cookstoves."

Global Alliance for Clean Cookstoves

"Replacing outdated cookstoves and open fires with modern energy services would prevent 800,000 child deaths annually."

Sustainable Energy for All

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Washington, D.C. 20433, U.S.A.

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Manufactured in the United States of America
First printing November 2012



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Africa Renewable Energy and
Access Program (AFREA)

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