



Energy Efficient Woodstoves for Schools

INTRODUCTION

Nearly all public boarding secondary schools in Nigeria use wood for cooking. About 30 million households depend solely on wood as a source of fuel for their daily cooking. According to the WHO, 95,300 deaths occur in Nigeria annually as a result of smoke from cooking with firewood¹. After malaria and HIV/AIDS, this is Nigeria's

third highest killer of mostly women and children.



Wood use in Nigeria is predominantly through traditional three-stone fires. These fires burn wood inefficiently as most of the heat is lost to the atmosphere. This is a waste of valuable resources both in terms of forest resources, as well as the high cost of buying fuelwood.

Nigeria loses approximately 3% of its forest annually; the use of firewood being one of the major causes. The growing population and the increasing cost of cleaner alternatives like kerosene, LPG and electricity only compound this trend. Even though the National Energy Policy seeks to substitute the use of wood with kerosene, cooking gas and electricity, this transition has been slow and in many cases is being reversed.



Today, smoke from millions of cooking fires has become an important cause of greenhouse gases which cause global warming.

¹ World Health Organization (2010) Indoor Air Pollution, National Burden of Disease Estimates.



Clean cookstoves that burn wood more efficiently save lives, forests and family income. This project will build and install clean cookstoves for schools in Cross River and Lagos States. It will build the capacity of stove producers and help them create markets for their products. In collaboration with the state governments, the project will also help develop strategies for household energy that promotes health, saves family income, enhances environmental protection and empowers women.



PROJECT GOALS

This project aims to create a template for reducing greenhouse gas emissions and health risks among women by improving the efficiency of the use of fuelwood in households and institutions. It will contribute to achieving the following key Millennium Development Goals (MDGs) in Cross River and Lagos States:

- Improve health among female cooks in schools and pilot households (MDG 5);
- Reduce the quantity of wood fuel used for cooking and greenhouse gas emission in participating schools and households. (MDG 7); and
- Create jobs for SMEs and marketers (MDG 1)

The project will deliver the following results:

- 80% wood energy cost savings in schools, annual emissions reductions of 6,300 tons of CO₂ and 700 women achieve better respiratory health.
- At least 200 new jobs created from stove production, distribution and retailing, and SMEs empowered by a growing demand for clean cookstoves.
- New sustainable energy policy frameworks for consideration by the governments of Cross River and Lagos States.



MAIN ACTIVITIES

The project has three main components. These include the following:

- *Stove technology development, production, installation and public awareness among students and school authorities*

The project will produce and install 60 litre institutional stoves with a proven wood use efficiency of at least 80% in secondary schools and other public institutions in Cross River and Lagos states. In addition, a pilot project will be carried out to test out 100 household stoves with wood use efficiency of at least 50%. The result of this pilot will determine the feasibility of launching a major national household stove initiative.

A lesson sharing workshop will be organized to educate students and staff of participating schools and the general public on the benefits of clean cookstoves.

- *Technical training and development of business and marketing skills for SMEs, engagement with banks and Micro Finance Institutions*

The project will build the technical and business capacity of stove producers in the states. At least 6 metal works SMEs will benefit from the training in stove design and production. By building and delivering quality stove technologies and working with Micro Finance Institutions, producers, distributors and retailers, a basis to engage with the private sector in creating a sustainable market will be established.

- *Development and presentations of policy frameworks to Cross River and Lagos State Governments.*

In partnership with the state government, the project will develop and present policy measures that will further enhance the market for these stoves and clean energy technologies in general.

By address existing technology and policy barriers, the project will set the stage to engage with the private sector and financial institutions in delivering a nationwide scale up of the market.

DURATION

The project will be completed in three years (2012 to 2015).

CONTACT

Ewah Otu Eleri, Executive Director, International Centre for Energy, Environment and Development (ICEED), Bassan Plaza, 3rd Floor, Block F, Plot 759, Behind Total House, Central Business District, Abuja, Tel: 08032062040.