

Assessing Gender Benefits and Sustainability Outcomes of Improved Cookstoves in Rural Africa

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The aim of this study carried out by *Berkeley Air Monitoring Group* for C-Quest Capital (CQC) was to measure and understand any changes in time use patterns and perceived levels of drudgery, and changes in fuel type after the installation of a TLC-CQC stove in rural Zambia.

The data showed evidence of a significant reduction in the self-reported time spent cooking, cleaning the kitchen area, as well as collecting and preparing fuelwood. Significant fuel switching was also evident from almost all wood collected being greater than 5cm in diameter to almost all being less than 5cm in diameter. This transition suggests a switch to sustainable small diameter branches, twigs and crop residues with a corresponding change from the great majority of fuel being collected outside the village boundaries to the great majority collected within the village boundaries.

In terms of time savings after installation of the TLC-CQC stove, cooks reported:

- spending an average of **an hour less per day actively cooking**, since the installation of the TLC-CQC stove and;
- **a reduction in 4 hours per week collecting cooking fuel**

The main cook was the person mostly responsible for the collection of fuel wood in all households, meaning she experienced most of the time burden from these activities, and also consequently, the time savings from the new technology. Most women reported to spend any saved time resting and sleeping. Very few women reported to use the extra time by engaging in extra income generating activities.

The perception of 'drudgery' is context specific and can be extremely challenging to define and measure. The measure of drudgery in this study was by applying multiple questions that probed about perceived hard work, levels of effort and enjoyment, together with an all-encompassing question that asked about tasks that were 'very hard work, either physically or mentally, was time consuming, repetitive, AND unavoidable'. This technique aimed to identify cross-cutting recurring themes that would illustrate the 'drudgerous' tasks.

The most frequency reported drudgerous tasks at baseline were **working on the land and fuelwood collection**. Fuelwood collection was drudgerous for nearly 40% of the participants before the introduction of the TLC-CQC stove, falling to less than 5% afterwards.

Although some women viewed cooking as drudgerous in the baseline, cooking was not viewed as drudgerous **by any participants** after installation of the stove. On the other hand, any reduction in time spent over a smoky open fire is a contribution to the health of women cooks and infants close at hand.

Ken Newcombe (CEO C-Quest Capital): *"This research provides further evidence of time savings of the order of 2 hours per day in switching to an improved cookstove in rural Sub-Saharan Africa and forms the basis for a new Drudgery Reduction VERRA/SDVista Methodology being designed by C-Quest Capital to quantify and verify time savings over a heavily discounted stove life.*

Selling forward these time savings up front to donors and foundations wishing to support gender benefits at even 10-20 Euro cents per hour would provide women with a basket of locally available goods and services of 150-300 Euro that could lift them to the next level of prosperity and permanently transform their lives".