

Pilot Study Report
for
Former Fuelwood Carriers Association
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Introduction

Gaia Association has been conducting studies on the ethanol-fueled CleanCook (CC) stove and indoor air pollution. The association plans to distribute 800 stoves in Addis Ababa, and it has already distributed 500 stoves in Addis households for a successful three month pilot study. The remaining stoves will be distributed to various Addis Ababa institutions, such as the Former Fuelwood Carriers Association (FFWCA). Thus far, Gaia Association has delivered five stoves to the FFWCA according to the plan of institutional study with a free one month supply of ethanol.

FFWCA, established in 1997 with 150 members, first conducted research on fuelwood gathering, such as the length of time and distance traveled for gathering, and the net profit. The primary aim of the association was to reduce the number of fuelwood carriers by creating other income generating activities. With a main office in the Shiromeda area and four branches in different parts of Addis Ababa, FFWCA today totals 654 members. The association plans to expand its branches to other parts of the country with a similar aim.

They have different income generating activities in their four branches (Keranio, Gulele, Kolfe, and Yeka). In Keraneo, they have a small dairy plant and farmland. In Gulele, they have a kindergarten and mill house; in Kolfe they have a weaving plant for traditional clothes. In Yeka, they have a cafeteria and an office to do the organizing of branches and to make the planning.



Gaia Association conducted a pilot study in FFWCA for a one month period with a liter of free ethanol per day supplied to each stove. The study aimed to gather information on perception of the stove and ethanol from the members of the association, since they are representative of Addis Ababa residents and they are linked with cooking fuels by profession. It was assumed that their perception about the CleanCook stove and ethanol fuel could add significance, because of FFWCA's awareness about fuels and their experience with providing wood fuels.

Limitations

There were some minor problems during the one month pilot study, thereby limiting the results somewhat. First, one of the offices (Yeka) closed due to some governmental related problem after they had received their stove. This reduced our sample of offices to four. The next problem was the free ethanol supply that was offered throughout the study, which no doubt created some biased responses to some of the questions. Based on

previous studies in Addis Ababa households, it is apparent that real consumption patterns and impressions change somewhat when the ethanol begins to be delivered with payment.

Data Analysis

The data analysis is made on the different questions of the follow-up questionnaires. The fill sheets and questionnaires are done twice a week for the one month period. Follow-up monitoring of the use of the stoves was conducted on a weekly basis thereafter but is not a part of this report.

Health Impact

The first question in the data analysis dealt with health impact. In addition, we conducted an indoor air pollution study for FFWCA (available in a separate report). The participants' responses are displayed in the table below with the respective date of data collection.

Question: Do you think that the CC stove has affected the overall health of the office?

S.NO	Branch Name	Date Of Biweekly							
		14/07/06		21/07/06		28/07/06		4/08/06	
		Yes	No	Yes	No	Yes	No	yes	No
1	Head Office	√		√		√		√	
2	Gulele	√		√		√		√	
3	Keraneo	√		√		√		√	
4	Kolfe	√		√		√		√	
Total		4	0	4	0	4	0	4	0
Percent (%)		100	0	100	0	100	0	100	0

The above data is from the four questionnaires for each branch with a total of sixteen questionnaires. The data is statistically significant since the respondents represent the entire staff of each branch.

From the above table we can observe that there is no perceived negative health impact from CC stove over a one month duration. Further, each respondent agreed that the CC stove resulted in no smoke, no soot, and no odor. The 100% no-health-impact response indicates their confidence that the CC stove is indeed clean, much cleaner than other stoves that they know.

Satisfaction and Efficiency of CleanCook (CC) stove

Question: Are you satisfied with the CC stove?

This question is about the satisfaction of the user with the stove regarding its fuel consumption, power, heat generation and other related issues.

S.NO	Branch Name	Date Of Biweekly							
		14/07/06		21/07/06		28/07/06		4/08/06	
		Yes	No	Yes	No	Yes	No	yes	No
1	Head Office	√		√		√		√	
2	Gulele	√		√		√		√	
3	Keraneo	√		√		√		√	
4	Kolfe	√		√		√		√	
Total		4	0	4	0	4	0	4	0
Percent (%)		100	0	100	0	100	0	100	0

The above table shows 100% satisfaction with the CC stove. Here one notes that the respondents answered the same for the entire one month period, time after time.

Quality of Ethanol

Question: How would you rate the overall quality of ethanol fuel?

S.NO	Branch Name	Date Of Biweekly															
		14/07/06				21/07/06				28/07/06				4/08/06			
		VH	H	L	VL	VH	H	L	VL	VH	H	L	VL	VH	H	L	VL
1	Head Office	√				√				√				√			
2	Gulele	√				√				√				√			
3	Keraneo	√				√				√				√			
4	Kolfe	√				√				√				√			
Total		4	0	0	0	4	0	0	0	4	0	0	0	4	0	0	0
Percent (%)		100	0	0	0	100	0	0	0	100	0	0	0	100	0	0	0

Legend

VH = Very high

H = High

L = Low

VL = Very low

Based on the above table, all respondents said ethanol is a very high quality fuel, and they consistently reported this for one month, e.g. throughout the month. This result also tells us they were very satisfied with the quality of the ethanol fuel used for the CC stove.

Safety of Ethanol

Question: How would you rate the overall safety of ethanol?

S.NO	Branch Name	Date Of Biweekly															
		14/07/06				21/07/06				28/07/06				4/08/06			
		VS	S	US	VU	VS	S	US	VU	VS	S	US	VU	VS	S	US	VU
1	Head Office	√				√				√				√			
2	Gulele	√				√				√				√			
3	Keraneo	√				√				√				√			
4	Kolfe	√				√				√				√			
Total		4	0	0	0	4	0	0	0	4	0	0	0	4	0	0	0
Percent (%)		100	0	0	0	100	0	0	0	100	0	0	0	100	0	0	0

Legend

VS = Very safe S = Safe US = Unsafe VU= Very unsafe

The above table reveals that the respondents felt the ethanol is very safe. The respondents answered throughout the month in the same way, judging that the stove's ethanol fuel was safe.

Use of Stove for Coffee Making

Question: Do you use the CC stove for coffee making?

S.NO	Branch Name	Date Of Biweekly							
		14/07/06		21/07/06		28/07/06		4/08/06	
		Yes	No	Yes	No	Yes	No	yes	No
1	Head Office	√		√		√		√	
2	Gulele	√		√		√		√	
3	Keraneo	√		√		√		√	
4	Kolfe	√		√		√		√	
Total		4	0	4	0	4	0	4	0
Percent (%)		100	0	100	0	100	0	100	0

Before, according to the baseline surveys we conducted, all branches of FFWCA used different types of fuels (like dung, wood, charcoal, and kerosene) to meet their indoor cooking energy needs, especially for coffee and tea making and boiling of cotton fiber in preparation for weaving. But now they prefer the CC stove for coffee making since it is easy to control the power of the flame, as stated by respondents.

Interest in Micro Finance to Purchase the Stove

Question: If micro-credit were available, would you use it to finance your CC stove purchase?

S.NO	Branch Name	Date Of Biweekly							
		14/07/06		21/07/06		28/07/06		4/08/06	
		Yes	No	Yes	No	Yes	No	yes	No
1	Head Office	√		√		√		√	
2	Gulele	√		√		√		√	
3	Keraneo	√		√		√		√	
4	Kolfe	√		√		√		√	
Total		4	0	4	0	4	0	4	0
Percent (%)		100	0	100	0	100	0	100	0

As noted in the above table, all branches of the FFWCA indicated that they would use micro-credit, if it were available, to finance their CC stove purchase.

Interest of other members to purchase the stove

Question: Do you think other members of the association are interested in owning the CC stove?

S.NO	Branch Name	Date Of Biweekly							
		14/07/06		21/07/06		28/07/06		4/08/06	
		Yes	No	Yes	No	Yes	No	yes	No
1	Head Office	√		√		√		√	
2	Gulele	√		√		√		√	
3	Keraneo	√		√		√		√	
4	Kolfe	√		√		√		√	
Total		4	0	4	0	4	0	4	0
Percent (%)		100	0	100	0	100	0	100	0

Here the representatives of the FFWCA in all branches said their associates would be interested in owning the CC stove. This answer was the same throughout the survey period.

Summary

As seen from the results of our survey, the FFWCA members developed a good impression of the CC stove. And here one point should be emphasized: the answers of the respondents represent not the view of a single person but rather a number of people whose views were sampled separately (in fact all of the members of the FFWCA staff. One may assume that these views reflect those of most members of the association based on the last table, which shows a 100% expressed interest by other members in owning the CC stove. The data analysis above shows that other questions on health impact, satisfaction, efficiency and safety result in a 100% positive response for all follow-up questions. This is a very good result for Gaia Association since the data is from representatives of the FFWCA, and they have reliable knowledge of fuelwood, other fuels such as charcoal, and cooking. This result conforms to our Addis Ababa household survey data.

As stated previously, FFWCA is also participating in the Gaia Association's indoor air pollution study, the results of which are presented in a separate report. Gaia Association is interested in working with the FFWCA because of our shared interest in cooking with improved fuels, and in the social, economic, and gender issues that relate to household energy, fuel gathering and cooking.



Learning how to use the CleanCook stove at the Former Fuelwood Carrier Association