Missionaries of Charity (MC) is an international religious congregation in the Catholic Church, founded by Mother Teresa in Calcutta, India, in 1950. The order gives wholehearted and free service to the world's poorest people without discrimination by race, color, language, religion or nationality. Missionaries of Charity is widely regarded by governments — including those of the United States and Ethiopia — as being one of
the most effective and efficient institutions in the world in targeting and distributing food aid to the most vulnerable parts of society. In Ethiopia, where Missionaries of Charity has been working since 1973, this means that malnourished street children, terminal AIDS patients and other marginalized groups are treated with dignity and compassion. In Ethiopia, Missionaries of Charity currently works out of 18 houses and covers all regions of the country (http://crs.org/ethiopia/partners.cfm).

Gaia Association (GA) placed CleanCook stoves in two facilities in Addis Ababa, the MC orphanage at Asko and the MC hospice near Sidist Kilo. The purpose was to introduce the CC stove and ethanol fuel to the sisters and workers, with the thought that the stoves could be used in the dormitories where safety and air quality are a must and where non-institutional sized stoves could be used to carry out such daily tasks as warming bottles for infants and making small meals. The sisters also indicated an interest in the stoves for personal cooking in their residences so that they could avoid the use of wood, charcoal and kerosene stoves.

The orphanage’s kitchen is large, spacious, and well-set up to prepare meals for several hundreds of children. The centerpiece of the main kitchen is a large, black iron kerosene stove with multiple burners. These burners are fed from an elevated fuel tank so the force of gravity duplicates the effect of the fuel being under pressure. As a result, the stove burns hotly, cleanly and efficiently and cooks quickly. But the kerosene fuel is a major cost for the orphanage.

A separate room contains four masonry wood burning stoves with Injera mtads. It is hot and smoky in these rooms even though the stoves are vented to the outside. With more than 300 children in the orphanage, a lot of Injera is cooked in this kitchen.
The main kitchen also has an electric stove which is rarely used as well as a biogas stove purchased with USAID funds. This biogas stove appears also not to be in use. It is a standard 4-burner stove with an oven. The orphanage is set up to use biogas produced from the compound’s septic tank beneath the latrines.

The CleanCook may serve as an auxiliary stove in the kitchen for specific, smaller tasks, and as a stove to be used in the dormitories and the sisters’ quarters. This was our first thought. There is a long, spacious counter in the kitchen that could accommodate a row of CC stoves. Depending how MC kitchens function in other facilities outside of Addis Ababa, the stove could serve a more central role in the kitchen. A larger, heavier duty CleanCook, with more burners, might have to be developed to be of use in a kitchen of this size that cooks for so many mouths.

After four months of use of the CC stove in the two Missionaries of Charity facilities, Gaia Association’s Yonas Abesha and Getenesh Tilaye conducted interviews with users of the stove in the MC sites. The responses or narratives are provided below, following the list of questions that were asked.

### Institutional Narrative Questions

1. **Health Impact**

   1. How has the CleanCook (CC) Stove positively impacted the physical health of you and your institution?

2. **Satisfaction and Efficiency of the CC Stove**

   2.a. How satisfied are you with the heat output of the CC Stove? How satisfied are you with the cook time (speed of cooking) of the CC Stove?

   2.b. How efficient (cook time/speed) is the CC Stove in comparison to other stoves you have used? (Specify the other stoves and the difference in cook times.)

   2.c. If the CC Stove is more efficient, about how much time per day is/was saved from cooking with the CC Stove?

3. **Safety of the CC Stove**

   3.a. How safe is the CC Stove in comparison to other stoves you have used? In what ways is it safer than the other stoves? (Specify the other stoves.)

   3.b. If you find the CC Stove to be safer than other stoves, how has using the CC Stove positively impacted your sense of well-being in the institution (in comparison to your safety concerns with other stoves)?

4. **The following questions address the use and social impacts of the CC Stove.**
4.a. Are your pots easier to clean with the CC Stove?

4.b. Do you move the stove from room to room? If so, for what reason?

4.c. Is the kitchen environment cleaner now? In what way?

4.d. Did anyone ask you how they can get the CC Stove for their home?

4.e. Did you show anyone how to use the stove? If yes, to whom did you show how to use the stove? Did they ask you to demonstrate, or did you offer to demonstrate the stove?

5. What suggestions do you have for improving the utility and design of the CC Stove?

NARRATIVES

The following three narratives were conducted in Amharic, written in English by Gaia Association’s Yonas Abesha and Getenesh Tilaye, and then typed in English by Cheryl O’Brien.

Site: Mother Teresa Home (Asko)

Their primary cook was interviewed by Getenesh on 14 October 2005, and her responses are below.

1. How has the CleanCook (CC) Stove positively impacted the physical health of you and your institution?

I like the CC stove. It is suitable to me and my institution, since it has no dangerous smoke except some soot on the bottom of the pot.

2.a. How satisfied are you with the heat output of the CC Stove?
How satisfied are you with the cook time (speed of cooking) of the CC Stove?

The CC stove cooks faster than other stoves. For example, for two litres of tea, it takes only 7 minutes. I am very delighted because it is done faster.

2.b. How efficient (cook time/speed) is the CC Stove in comparison to other stoves you have used? (Specify the other stoves and the difference in cook times.)

The CC stove is very fast to cook and boil water as compared with other stoves, especially when I prepare tea and sauce for pasta. It is so fast to cook. It is faster than kerosene and charcoal stoves.

2.c. If the CC Stove is more efficient, about how much time per day is/was saved from cooking with the CC Stove?
3.a. How safe is the CC Stove in comparison to other stoves you have used? In what ways is it safer than the other stoves? (Specify the other stoves.)

Since the CC uses alcohol fuel, I have to take care to use the stove. (We have a bio-gas stove, kerosene stove, and electric stove.)

3.b. If you find the CC Stove to be safer than other stoves, how has using the CC Stove positively impacted your sense of well-being in the institution (in comparison to your safety concerns with other stoves)?

The CC stove is safer than the bio-gas stove, because when we shut down the stove I switch it off easily. In case of bio-gas to switch off the stove, I have to shut down two things: one to switch off the fire and [then] to stop the fuel to come to the stove. If I forget to switch off the fuel canal, it causes air pollution. The electric and kerosene stove is safer than the wood and charcoal stoves, and is easier to use. [She explained that she has a stove that uses both electricity and kerosene.]

4.a. Are your pots easier to clean with the CC Stove?

It can clean easily, but the bottom of the pot has some soot.

4.b. Do you move the stove from room to room? If so, for what reason?

No, we cook only in the kitchen.

4.c. Is the kitchen environment cleaner now? In what way?

The stoves we used previously also have no smoke. The kitchen has clean air.

4.d. Did anyone ask you how they can get the CC Stove for their home?

No, no one asks.

4.e. Did you show anyone how to use the stove? If yes, to whom did you show how to use the stove? Did they ask you to demonstrate, or did you offer to demonstrate the stove?

Yes, I showed it to the other, second cook. I myself offered to show her.

5. What suggestions do you have for improving the utility and design of the CC Stove?

For institutions like ours, the CC stove should be designed in a big size and the fuel should be refilled easily. It should be able to prepare bread and cake, and have its own...
time adjustment. There should be a control when the fuel is finished in the canister, like a meter or glass to see the ethanol.

For household purposes, the size is good, but the way how to fill the fuel is not suitable.

**Missionaries of Charity (Sidist Kilo site)**

**Hiwot Kidane (one of the cooks) was interviewed by QC Yonas on 12 October 2005. Her responses are below.**

1. How has the CleanCook (CC) Stove positively impacted the physical health of you and your institution?

   We find the CC stove to be so good, quite different from other stoves, which have been used by the majority of the people. I find that the CC stove doesn’t bring any harm on our physical health as well as the institution.

2.a. How satisfied are you with the heat output of the CC Stove? How satisfied are you with the cook time (speed of cooking) of the CC Stove?

   The heat output of the CC stove is very satisfying. I find that I can maintain the desired amount of heat. But I feel that the CC stove is too small to cook enough of the amount as we need, because in our institution we give service for thousands of people from different compositions, female, male, children, patients, disabled, etc., and we couldn’t be able to use the CC stove for the larger need of the institutional cooking purpose, because the stove is more preferable for small pots, utensils or cooking materials. Or it is better to make the stove a larger size. Here in this institution, we use different stoves, electric, kerosene, etc., which are so large, having a capacity to carry more than 50 kg of cooking foods at once. So for our institution, it is better to have such a large kind of stove.

   Concerning the cook time, speed of cooking, I frankly find that the CC stove produces a higher heat than even electricity and kerosene stoves. My friends and I prefer this CC stove when we need to cook simple and small amounts of food with short time.

2.b. How efficient (cook time/speed) is the CC Stove in comparison to other stoves you have used? (Specify the other stoves and the difference in cook times.)

   The efficiency of this CC stove is so good as compared with the small stoves we had, but it is difficult to compare the CC stove with our larger stoves that we frequently, daily use for cooking. Because our saucepans are too large for what the CC stove holds. The CC stove holds small pots, so it is too difficult to measure by comparing the stove we have used so far and more with the CC stove. But the speed of cooking for small pots on the CC stove is good even comparing with the kerosene and electric stoves.

2.c. If the CC Stove is more efficient, about how much time per day is/was saved from cooking with the CC Stove?
We don’t use the CC stoves frequently. We occasionally use the stove, because I stated about the way and the type of stove we used here in our institution. On the other hand, the CC stove needs much more fuel, ethanol, than the kerosene stove, so we do not frequently use the CC stove. And we didn’t know exactly the time we saved by using the CC stoves.

3.a. How safe is the CC Stove in comparison to other stoves you have used? In what ways is it safer than the other stoves? (Specify the other stoves.)

We find the CC stove to be safe, the way that we feel free of danger of a fire or burns or explosions. Of course, we had no experience of a danger or explosion or burns, etc. in our institutions. We have used different kinds of stoves, basically kerosene and electric stoves, which didn’t bring any harm so far. And we also find the CC stove to have not caused any harm or dangers for us. But as I said, we didn’t frequently use this stove as like the kerosene stoves. But I am not able to say this one is safer than the other. We like and use all stoves found in our institutions without any horror and fear.

3.b. If you find the CC Stove to be safer than other stoves, how has using the CC Stove positively impacted your sense of well-being in the institution (in comparison to your safety concerns with other stoves)?

Due to the unique nature of the CC stove, I have decided to purchase and use it in my house for the future. Although I have a kerosene stove; it is available at the market. I am very happy to buy the CC stove for my house to cook, because I find the safety characteristics of the CC stove to be better than the kerosene stove.

4.a. Are your pots easier to clean with the CC Stove?

No.

4.b. Do you move the stove from room to room? If so, for what reason?

Of course the CC stove is easy to move from one place to another. But here in our organization, it has its appropriate places. And I couldn’t move this CC stove away from its place.

4.c. Is the kitchen environment cleaner now? In what way?

The kitchen environment of the institution is so clean. It is well constructed, painted and cemented, both the wall and floor. It has enough windows, doors, etc., as well as spaces for ventilation on surfaces of the walls. But it is obvious that when we start to cook, the internal room environment has been affected by the type of odor of the given food item. Otherwise, our kitchen environment is neat.

4.d. Did anyone ask you how they can get the CC Stove for their home?

Everybody knows that the stove is the property of the Missionaries of Charity institution. And we thought that it is through the charity organization that the stove arrived. But to
respond for the question, nobody asked me how they can get the CC stove for their own home.

4.e. Did you show anyone how to use the stove? If yes, to whom did you show how to use the stove? Did they ask you to demonstrate, or did you offer to demonstrate the stove?

Yes, different individuals saw this stove when they visit our organization and asked me how to operate it. And I showed them how to operate it. Most of our people from branch offices who work in Addis Ababa know of this stove.

5. What suggestions do you have for improving the utility and design of the CC Stove?

To improve the CC stove, I suggest a larger size stove used for our institution. It is better to have handles. It is better to change the position of the canister. It is difficult for the users to turn the stove upside down to fuel the ethanol. So the concerned body should find alternative ways of refilling the ethanol. It is also difficult to strike fire. It needs long stick-like things, so you have to consider some of these problems.

Missionaries of Charity (Sidist Kilo site)

Borhane Tadesse (one of the cooks) was interviewed by QC Yonas on 12 October 2005. Her responses are below.

1. How has the CleanCook (CC) Stove positively impacted the physical health of you and your institution?

I feel that the CC stove has some sort of odor, alcoholic odor. I dislike this smell, which is unpleasant for me. I also thought that I might be sick by such a smell. Different people have asked me why the stove has such a smell. It is better to use odorless fuel, so in my view the stove has negatively impacted my life. I don’t know about the view towards this stove by officials of the institution.

2.a. How satisfied are you with the heat output of the CC Stove?
How satisfied are you with the cook time (speed of cooking) of the CC Stove?

The heat output of the stove I think is good. I maintain the level of the heat output, so I can cook as I want. I am also satisfied with the cooking time.

2.b. How efficient (cook time/speed) is the CC Stove in comparison to other stoves you have used? (Specify the other stoves and the difference in cook times.)

Comparing the CC stove with other stoves regarding its efficiency, I find the CC stove to be a far more efficient stove. I don’t have any information of different stoves’ cooking time or speed, but when I need to cook small foods in a short period, I prefer to use the CC stove. But here I find the CC stove too small as compared to our different and large stoves.
2.c. If the CC Stove is more efficient, about how much time per day is/was saved from cooking with the CC Stove?

Here also I can’t say exactly about the time I save when using the CC stove, but I find that the stove can produce a stronger heat than some other stoves.

3.a. How safe is the CC Stove in comparison to other stoves you have used? In what ways is it safer than the other stoves? (Specify the other stoves.)

Comparing to other stoves, the CC stove is safe. I think any sudden fire will be easily extinguished with the CC stove, and this is impossible for the kerosene as well as electric stoves. Therefore, we feel safe when using the CC stove.

3.b. If you find the CC Stove to be safer than other stoves, how has using the CC Stove positively impacted your sense of well-being in the institution (in comparison to your safety concerns with other stoves)?

As I have been saying, I find the CC stove to be one of the safer stoves in my experience. I also read the safety instructions of the CC stove. We like it well, but I find the stove is so small for the need of our institution, because we always use large stoves for cooking. But for my home, I am the one who is interested in the stove. If the stove was free from any smell, I would like to purchase it in the future.

4.a. Are your pots easier to clean with the CC Stove?

No.

4.b. Do you move the stove from room to room? If so, for what reason?

No, because we put the stove in its appropriate place on that table in our kitchen. We didn’t think of moving it.

4.c. Is the kitchen environment cleaner now? In what way?

Yes, because the institution by itself controls the cleanliness of the room. The room is constructed with cement, is painted, has aeration, and the room is kept clean by the individuals assigned for this purpose.

4.d. Did anyone ask you how they can get the CC Stove for their home?

Yes.

4.e. Did you show anyone how to use the stove? If yes, to whom did you show how to use the stove? Did they ask you to demonstrate, or did you offer to demonstrate the stove?

Yes, for those who asked me about the stove.
5. What suggestions do you have for improving the utility and design of the CC Stove?

My suggestions are that it is better to use an odorless fuel. It is good to be large in size to hold large pots. The stove has difficult ways of handling for refueling, so that needs improvement. The way of filling ethanol is so tiresome. It is better to have a canister easily thrusted into and out of the side of the stove.

**Photo on page 2 courtesy of the World Health Organization (copyright: WHO/Petterik Wiggers).**