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I. INTRODUCTION

In 2004, Project Gaia began a pilot study of the CleanCook (CC) stove in Ethiopia, importing 850 ethanol-burning CC stoves and placing them in rural and urban homes across Ethiopia. After 2 years, pilot studies were completed for 500 stoves in the city of Addis Ababa, 300 in three refugee camps (Shimelba in northern Ethiopia, Bonga in western Ethiopia and Kebrabiefay in eastern Ethiopia), and 50 in Denan, a rural village located in the Ogaden region. In total, approximately 7,000 individuals have benefited from the pilot program. In each test site, results of the pilot program were extremely positive. The CC stove replaced kerosene, charcoal, firewood and even LPG in most of the test homes. Cooks reported being impressed by the safety and efficiency and cleanliness of the stove. They could use the time saved for other, more productive activities. In addition they also noticed relief from the symptoms of asthma, burning and itching eyes, irritated nose and throat, and coughing. In the refugee camps, women’s and girl’s security was greatly improved as the need for gathering fuelwood was removed.

This report is an overview of the activities, projects and partnerships that the Gaia Association was involved in during 2005 and 2006. The Association, as well as its partners continue towards its goal of providing a clean and safe cooking technology to the people of Ethiopia.

II. PROJECTS

1. Addis Ababa

1.1. Addis Ababa Sub Cities

When the project commenced work started with the Addis Ababa 10 subcity managers to carry out pilot tests on the stoves. Tests were carried out in each of the 10 subcities by placing 50 stoves in one Kebele of each subcity for the duration of the three month pilot study. The results of these studies illustrated wide consumer acceptance of the stoves with original fuels like Kerosene, charcoal, firewood and even Liquefied Petroleum Gas (LPG) being replaced by ethanol in many of the test homes. Cooks found that the cooking time was greatly reduced with the new stoves. Pilot tests also showed a large reduction and relief from symptoms of Asthma, burning and itching eyes, irritated nose and throat and coughing.

Gaia association begun by doing baseline surveys within the fifty participating households, from each sub city with Addis Ababa. Together with the government city administration, Gaia selected representative Kebele's from each sub city. From the Kebele's fifty households that represent the higher, middle and lower income levels were
selected. After the selection of the participant households, we made a base line survey in each household. The base line survey was done to find out the background fuel and stove use trend within Addis Ababa. Then the households were introduced to clean cook stove with training on use of the stove and safety.

It was planned that Clean Cook Stoves would be placed for three months in each household for the pilot study. During the pilot study we delivered ethanol in three different ways, separating each month as a phase. For the first month, households were delivered ethanol for free, in the next a medium price was applied and for the last month the full price of ethanol was applied. This was done to get a realistic impression and consumption from the households being surveyed as a sample population. During the three month pilot study, Gaia carried out a follow up survey to find out the impact of the Clean Cook Stove within each family.

From the three months pilot study in Addis Ababa, it was found that the Clean Cook Stove is a safe stove to use in the community. The participants in the survey all showed a desire to own the stove. The price of Ethanol in general didn't have an impact in the trend of Clean Cook Stove usage, this pattern has also been shown during the third phase of the study. Clean Cook Stove was able to replace the previously used Kerosene, Charcoal and LPG stoves. [See attachment 1: Addis Ababa Narrative Report]

Lemlem cooking traditional coffee on the CC Stove
1.2. FWFWCA / Former Woman Fuel Wood Carriers Association /

Former Women Fuel Wood Carrier Association was established in 1997 with 150 members. Initial research focused on the challenges of fuel wood gathering for example the distance carriers had to go for fuel wood gathering, the net profit they made and how long it took to collect the fuel wood. After these initial studies into the difficulties, the Former Women Fuel Wood Carriers Association (FWFWCA) was established. The primary aim of the association was to reduce the number of fuel wood carriers by creating replacement income generating activities, and currently there are 654 members. They have four branches excluding the main office and in each branch they have different activities like Catering, Mill House, Weaving, Different Hand Works, Kindergarten and other additional activities.

A pilot study was carried out within FWFWCA for a month, with a liter of ethanol supply per day in four of the branches. The study aimed to understand the perception of the association members of the stove especially as they are a useful representative for Addis Ababa residents and their knowledge of fuels.

As can be seen in the results, which are representative of a majority of FWFWCA members, the stove was very popular. A majority viewpoint is justified due to the final question which concerns the interest of other members of the association.

One of the mandates in the association is to teach about IAP. This subject matter was combined with teaching about the stove, its fuel, and safe handling and use of each. Discussions were started by focusing on IAP and its impact on the health of all members of the family in selected six HH’s for the IAP test.
The project provided an opportunity for the participants to gain firsthand knowledge of how IAP is a major human health concern. Several issues were addressed regarding the study and the subject of IAP. The participants were extremely concerned how IAP affected their lives and revealed varied health concerns regarding the issue. When the study was completed participants recognized that the equipment placed in their homes would contribute to data that in the future that would ultimately aid them with their condition. By conducting the study, legitimacy was given to several of the stakeholders’ concerns that IAP has negatively impacted the participants’ health and livelihoods. The stakeholders involved also expressed the positive effects of the Clean Cook and how it mitigated the negative effects of IAP.

![IAP study in FWFWCA member house](image)

Gaia’s aim is to work with the association and provide all of their members with a Clean Cook stove, in collaboration with their funders, namely the World Bank. This program is also ideally suited for the sale of carbon credits into a voluntary carbon market. Each stove displaces carbon emissions in an amount similar to what is produced by a properly maintained automobile driven an average number of miles each year. Therefore, one Clean Cook stove has the ability to “offset” the carbon emissions, for example those produced by a family automobile.

This Program will have to be supported in the future by donor funding because of the inability of the FWFWCA members to purchase stoves. The opportunity that now exists in Ethiopia with affordable price of ethanol for market development of ethanol in the household sector. Creating a fuel delivery system that permits efficient and economical delivery to and storage of fuel at FWFWCA is critical to the sustainability of this program. [See attachment 2: FWFWCA survey report]

### 1.3. Missionaries of Charity

Missionary of Charity is concerned with Catholic Religious Missions, and it is a home for sick and dying people. They have 15 locations in Ethiopia; Assosa, Gonder, Mekale, Debremarkos, Awassa, Addis Ababa, Jimma, Kibremengist, Bale Goba, Gambella, Jijiga,
Alamata, Dire Dawa and Adwa. All of their locations provide the same treatment for sick and dying people.

Stoves were introduced to all of their locations and pilot tests were carried out in each of the locations. The representatives of the sites carried out the surveys by utilizing the sheets prepared by Gaia Association. These locations have suffered the detrimental effects of Indoor Air Pollution from traditional stoves, with ailments like headaches and eye irritation. One of the key findings from the pilot tests was that the current design of the Clean Cook stove was incapable of supporting the large pots used for cooking. This has helped Gaia in considering the design of a bigger stove for cooking.

1.4. Good Shepherd Sisters

The international congregation of Good Shepherd Sisters (GSS) has about 5,000 members whose service worldwide is focused on women and children who have been marginalized in their societies and thus need special care and guidance because of social or family problems.

Good Shepherd sisters were introduced to Clean Cooking technology through their member households. Six households were selected from the member households for the new cooking technology and IAP test. The selected participants were extremely concerned how IAP affected their lives and they exposed diverse health concerns regarding this issue. When the IAP equipment was set up in the first home, a group of at least 5 observers assembled, drawn from neighboring homes and from other homes participating in the study. While the IAP team worked to place the equipment, the community engaged in a lively discussion with the assembled group about the equipment and the study. The IAP test thus served as an opportunity for education and outreach.
When the set-up process was completed most of the IAP test homes understood in general terms what the tests were for and what the equipment would measure.

The IAP data collected at GSS provided evidence not only to Gaia but also to the stakeholders of alternative fuels and technologies. At the completion of the study the participants understood that the new cooking technology placed in their homes had improved the conditions of air quality.

Gaia Association is closely working with the GSS to benefit all members through the clean and safe energy program. When the project is placed into action it will benefit 700 members of GSS and it will result in creation of a complete, stand-alone fuel depot capable of receiving, storing, and dispensing, metering, blending and maintaining ethanol safely and economically with minimal operational and maintenance requirements.

[See attachment 3: Addis Ababa IAP report]

II. Refugee Camps

In common with the majority of households in Ethiopia, the dominant cooking fuel used by the refugees is firewood, meeting over 97% of the total household energy requirements. Most refugees still use the traditional 3-stone cooking system. Equally the most important and concerning issue is the health damage to women and children from the fumes caused by incomplete combustion and unsustainable fuels.

Gaia association has made a partnership with UNHCR to supply Clean Cook stoves and Ethanol in the different refugee camps around the Ethiopian boarder. This was primarily due to the severe household energy problem in the camps. Even in locations where there is sufficient fuel wood available, using it for household energy resulted in high deforestation and health problems. Gaia made its' partnership with UNHCR to minimize the existing problem around refugee camps. It has started with pilot studies in three different refugee camps. The camps selected for the pilot study are in three different geographical locations of Ethiopia. The refugee camps included in the pilot study were; Shimelba (Eritrean refugee camp in Northern Ethiopia), Kebribeyah (Somali refugee camp in Eastern Ethiopia) and Bonga (Sudanese refugee camp in Western Ethiopia). The association carried out a three month pilot study in each camp and priority for the distribution of Clean Cook stoves was based upon the initial pilot studies.

2.1. Shimelba Refugee Camp

This camp is located in the northern part of Ethiopia. The camp was established in 2004 and has 12,130 refugees. Due to the scarcity of fuel wood in the area, a conflict between the local community and the refugees has arisen. Considering the situation in the area, UNHCR and its partner Gaia decided to carry out pilot testing of Clean Cook stoves in the camp.
The pilot study was done with 150 CC-stoves which were placed in the refugee’s homes within the camp. Ethanol was supplied to the testing homes on a basis of one liter per day during the testing period. The study started with a baseline survey which helped to find out the background fuel use trend in the camp. Follow up surveys were collected during the next phase of the study to find out the impact of the new cooking technology in the homes of the camp. Narrative surveys were also conducted so that the study would give a clear picture of each test carried out. Analysis carried out on the study showed that the CleanCook stove placed in the refugee homes was able to replace only 50% of the previously used fuels such as fuel wood. The CleanCook stove was very popular with the refugees even though it wasn’t sufficient to meet their cooking needs, especially for cooking traditional Injera.

[See attachment 4: UNHCR Shimelba Camp Project Evaluation Report]

2.2. Kebribeyah Refugee Camp

The UNHCR Kebribeyah Camp, established in 1991, has approximately 16,387 Somali refugees, representing various different clans. The outer walls of their housing primarily consists of roots and the upper parts of a tree to make an upside-down U-shaped hut; there is mud on the bottom half of the interior walls and the exterior walls are covered by old clothes and blankets. Some households have a small kitchen separate from their sleeping quarters, however most families cook and sleep in one hut. Kebribeyah refugee camp is situated on arid and semi-arid land. The vegetation of the region is classified into three main physiognomic and structural types: gallery forest (5%), torn savannah (80%) and semi-arid vegetation (15%). Deforestation and subsequent soil erosion appears to be the cause of the absence of most forms of vegetation, which is further compounded by scarce natural water sources in the areas surrounding the camp.

Gaia distributed 130 stoves in the camp to introduce the clean cooking technology and pilot testing. The houses where the pilot tests were carried out were supplied with one liter of ethanol per day. The study proceeded similarly as in the Shimelba refugee camp; it included a base line survey as well as follow up surveys. The study also included Indoor Air Pollution tests in the participating households.
An Indoor Air Pollution (IAP) study is essentially indoor air quality monitoring which focuses on concentrations within the kitchen of Particulate Matter and Carbon Monoxide (CO). The study includes a before (while households using fuel wood/charcoal/kerosene stoves) and after (while households using Clean Cook stove fueled by ethanol) section.

Monitoring equipment is placed in the kitchens according to the requirements given by CEIHD (Center for Entrepreneurship Health and Development). The equipment simulates the height of a standing woman who is cooking. The devices which are placed in kitchens are the HOBO CO logger, which is set for every minute to record the CO concentrations in the room. The UCB measures the PM concentrations every minute (in units of milligrams PM per cubic meter of air, mg/m³). Gastec tubes are used to collect the CO data. The Gastec CO tube offers another way to read the CO levels. The tubes are broken at the tip and placed upside down so they are able to collect the CO concentration.

The IAP monitoring was done before and after the introduction of the Clean Cook stove in order to compare the change resulted in indoor air pollution. The IAP study was done in twelve refugee kitchens of Kebribeyah. Together with the monitoring in each household of twelve homes, awareness was created on IAP within the refugee community.

[See attachment 5: UNHCR Kebribeyah Camp progress report]
[See attachment 6: Kebribeyah IAP report]

2.3. Bonga Refugee Camp

The camp is located in the Western part of Ethiopia, and has 17,724 Sudanese refugees. The refugee camp is located adjacent to a forest which serves as a source for fuel wood demand of the refugees in the camp. The refugees’ use of the forest for fuelwood has
causes widespread deforestation in the area. Gaia Association has conducted pilot testing in the camp so that traditional fuel wood stoves will be replaced by the new cooking technology to minimize deforestation and indoor air pollution. The three month pilot study conducted in the camp showed that the camp dwellers traditional cooking methods require a large pot cooking which is not met by the Clean Cook stove.

![Sudanese refugee woman cooking with CC-stove](Image)

Gaia has also carried out pilot testing in the homes of Bonga camp. A before and after study was done by placing IAP monitoring equipment in the test houses. The monitoring was able to illustrate the reductions in the kitchen concentrations of PM and CO through the introduction of the stoves.

[See attachment 7: IAP Report]
[See attachment 8: Bonga Narrative Report]

After completion of the pilot studies in the three camps, analysis was carried out. The analysis from Shimelba showed that the stove was liked however it was unable to make Injera. Therefore the stoves have not resulted in a higher percentage drop in the fuel wood consumption in the households, it has brought about 50% reduction in fuel wood usage. For this reason we decided to shift the stoves to Kebribeyah camp where they can make a meaningful difference.

In Bonga, the stoves were also unable to support large pot cooking for "Genfo" which is traditional Sudanese food. As a result the drop on the fuel wood used after the introduction of Clean Cook stove was not as high as expected. The indoor air pollution monitoring result showed minimum levels of pollution in the kitchen even before the introduction of Clean Cook stove, mainly because the refugee's tend to cook outside in the open air.
In the case of Kebribeyah, the result was different as the stoves were able almost completely replace fuelwood as a cooking fuel. This occurred because of the predominant cooking culture which doesn't require large cooking pots as the Somali refugees "Injera" is small and can easily be cooked on the Clean Cook Stoves. The result of the IAP study showed high pollution levels before the introduction of Clean Cook stoves and a significant drop in pollution levels after the stoves were introduced. In addition Kebribeyah has no bush or other fuels which can be used in the kitchens for the cooking activities, therefore these combined factors meant focus was placed on Kebribeyah refugee camp.

The results of the analysis made by the UNHCR and Gaia pointed towards a need to scale up the stove project in the Kebribeyah camp. An agreement between the UNHCR and Gaia was made for 2006, and begun with the promise of an additional 500 stoves in addition to the 130 stoves which were already placed in the camp. It is expected that at the end of the year the total number of stoves placed in Kebribeyah camp will reach 780 relocating the 150 stoves from Shimelba into Kebribeyah. An agreement for 2007 with UNHCR to maximize the number of stoves in the camp and maintain the current stoves being used in the camp well was also signed.

3. OWDA (Ogaden Welfare and Development Association)

OWDA, a non profit, non governmental organization, works with government, civil society organizations and other partners in its region to bring about lasting and significant social change in one of the most backward regions of Ethiopia by sustainable human development through the empowerment of the poor.

The main objectives includes testing and studying the adoptability and usability of the Clean Cook stove, to test the acceptability of improved stoves by Denan community, to determine the impact of the stove on firewood collection and environmental resource conservation and to assess the health benefits from removal of smoke.

A pilot study had already been carried out on 50 alcohol cooking stoves in Somali regional, State of Ethiopia, particularly Danan town through OWDA. The households who had an opportunity to use the Clean Cook stove were very impressed. The trainees trained their family members on the use of the stoves. Moreover, girls who were going to school regained their opportunity to attend their classes as well as have leisure time for activities like studying at home. The women and girls were very happy to not have the responsibilities of firewood collection.

[See attachment 9: Report on OWDA]
III. Partners and partnerships.

3.1. Dometic AB

Dometic AB is a technical working group with Dometic AB, a Swedish company, which is the original stove manufacturer and originator of this project concept. Gaia Association and Dometic AB have been working together on re-design, for use in Ethiopian households from HH’s respond.

For the re-design of the clean cook stove, a study was conducted by Gaia to ascertain the perceptions of urban households in Ethiopia. The new one-burner Clean Cook stove was placed in ten households that were selected to participate in the study. Five households had previously taken part in the two-burner pilot study, while five families had no prior experience with the technology. The study was carried out over a fifteen-day period, during which time, the house holds were provided with a one-burner stove and a supply of ethanol. Narrative surveys were conducted to determine the users’ impressions about the stove. Based on the responses of ten households in Akaki Kality Sub-City Gaia provided suggestions for Design Modification of the stove. In addition work on the pot for modifications of the support for better efficiency. The new pot support successfully increases the combustion efficiency of the stove, both increasing the firepower and decreasing CO emissions.

We have plans for the future to work together to import more CC stoves for the refugee camps and to transfer the technology of stove making and know-how from Sweden to Ethiopia for setting-up local stove manufacturing plant.

3.2. Fincha Sugar Factory

Fincha Sugar Factory is the state-owned sugar factory which is currently the sole producer of ethanol in Ethiopia. Currently they are producing 8 million liters of ethanol per annum. We have been receiving ethanol for our stoves since the beginning of the project. We purchased 62,600 liters of ethanol from Fincha Sugar Factory in 2006 for Kebribeyah project, 2112 liter of ethanol for Addis Ababa pilot study, 1800 liter for Bonga 120 liter for FFWCA, 1530 liters of ethanol for Missionary of Charity in additions to that we used for IAP after study and for office uses. The ethanol transported from Fincha to Addis Ababa is placed in storage barrels. Approximately 14,000 liters of ethanol was subsequently transported to Kebribeayah camp where it was stored in a storage tanker installed for this purpose. Every year we set a contractual agreement with Fincha for supply of ethanol and our project showed them how important is ethanol for household energy and we will continue to work together in the future.

Gaia Association has been purchasing ethanol from Fincha for an extended time. Currently the project is scaling up its demand for ethanol which requires a positive and strong relationship with Fincha and since we were going to deal with the transporting system, scale up of ethanol consumption and overall industrial visit Gaia association made an industrial visit to Fincha sugar factory in 2006.
3.3. Makobu Enterprise PLC

The Gaia Association is now working closely with Makobu Enterprises PLC, a local Ethiopian private limited company, which will be the eventual stove importer and ultimately, local manufacturer. The Gaia Association and Makobu, with some assistance from the UNDP under the Growing Sustainable Business Program, have hired a consultant to draft a business plan for the commercialization of the stove and ethanol in Ethiopia to begin with and a workshop with the government officials to introduce Clean Cook stove is being arranged.

3.4. UNHCR / United Nation High Commission for Refugees

It is a United Nation High Commission for Refugees and entirely works for refugees with different governmental and non governmental organizations. We started working with UNHCR by introducing the Clean Cook stove to their refugee camps commencing in the middle of 2005. Gaia association introduced the stove to their three different refugee camps; these are Kebribeyah (Somali refugee camp) situated in eastern Ethiopia, Shimeba (Eritrea refugee camp) in northern Ethiopia and Bonga (Sudanese refugee camp) in south west Ethiopia. After the introduction, according to the result of the study focus was placed on one of the camps; Kebribeyah to scale up the project. UNHCR funded up to 50% of the total cost of the project for the year 2006. The plan with UNHCR is to fully supply + 2000 refugee families in the Kebribeyah refugee camp with Clean Cook stoves.

The Gaia Association team participated in the workshop and training for Participatory Assessment (PA) in Jimma and Kebribeyah in 2006. This workshop was arranged by UNHCR as a training exercise for the multifunctional team, comprised of various UNHCR implementing partners and other contributors planning to take part in the PA of Kebribeyah refugee camp.

Participatory Assessment is a tool developed to promote partnerships with refugees by establishing channels of meaningful dialogue with refugee men and women of different age groups. It may be used to gather reliable and accurate information regarding the protection risks facing refugees, their causes and possible solutions. This process gives refugees of all ages the opportunity to discuss and prioritize these and suggest ways to minimize and deal with them. Participatory assessment is crucial for evaluating and improving ongoing programs in the refugee camp and for identifying deficiencies within these programs. It is, therefore, an invaluable tool not only for the UNHCR, but also for its implementing partners, in appraising the impact of their projects on the target beneficiaries. Participatory assessment gives a voice to an otherwise vulnerable and voiceless community.
3.5. ZOA Refugee Care Ethiopia

ZOA Refugee Care is involved in environmentally friendly technologies, awareness and improving local water sources. Since Gaia is also working on environmentally related issues we are engaging in a partnership with them. A total of 20 households were selected in Bonga camp and 150 household were selected in Shimelba camp by ZOA to participate in the three month pilot study that was conducted.

ZOA with UNHCR and Gaia Association hopes to add a tree planting program to the stove intervention in 2007. Recipients of the stove and fuel will be asked to “pay back” the value of the stove and fuel by providing labor for planting trees in a managed program overseen by a forester. Gaia Association will also evaluate the feasibility of starting or collaborating in a handicraft program that would allow women to use time that had previously been spent collecting firewood to do handicraft work to allow income generation. Gaia Association has planned an office at Kebrhibeyah to control the over all work at the camp with UNHCR and other partners.

Gaia also has plans to participate in a program to help internally displaced people in addition to refugees especially with issues such as deforestation, erosion, and desertification by reforestation.

3.6. GTZ

GTZ works to promote improved (clean and efficient) household energy practices and monitor the impacts to ensure success. GTZ helps allow households to switch to cleaner fuels, reducing inefficient use of polluting solid fuels which restricts economic development and has detrimental impacts on health and the environment.

Gaia has been working together with GTZ on indoor air pollution monitoring studies and the promotion of clean cook stove. In the future this combined effort will continue to promote Clean Cook stove and the effects of high levels of Indoor Air Pollution through IAP measurement and raising awareness.

3.7. Ethiopian Rural Energy Development and Promotion Center

This is a governmental agency under the Ministry of Mines and Energy that creating better energy sources, especially in rural Ethiopia. Gaia has been working with the ministry to get technical support.

Rural Energy staff, with the assistance of four surveyors, conducted survey work between the 16th –17th June 2006. The surveyors were given training and asked to gather the selected 40 households (from the original 130 pilot homes) at Kebrhibeyah ARRA compound to administer the surveys. In addition to the survey work, the Rural Energy staff gathered data on fuel wood gathering. Bundles of firewood were weighed to calculate an average weight and information was gathered on time spent gathering and distance traveled to collect fuel wood. Rural Energy, with the assistance of the Gaia team, went on to conduct a focus group involving 10 key informants (women) in a private
home in the camp. The results of the Rural Energy survey work support the existing findings of the Gaia Association, with respondents reporting similar benefits in terms of health, safety, environment and socioeconomic benefits.

[See attachment 10: *A report by Ethiopian Rural Energy and Promotion Center*

**3.8. FEPA / Federal Environmental Protection Authority / and Addis Ababa EPA**

FEPA work on environmental protection activities and Gaia has introduced the stoves to the newly built Addis Ababa Condominium houses, whereby a proposal is being sent to FEPA to GEF / Global Environmental Facility. The EPA would work with Sub-City Administration to control and administer the stove financing into the Condominium through national bank financing. The Sub-City fuel storage infrastructure would also be financed. As a result, a major energy need (cooking) would be acknowledged in urban Condominium development.

The nature and benefit of the Gaia Association in combating desertification and deforestation is almost as important and significant as its impact on human health with the improvement of indoor air because of this we are working together on deforestation and desertification with EPA.

**3.9. ARRA / Administration for Refugee and Returnee Affairs /**

This is a governmental agency working as an implementing partner with UNHCR in program evaluation and monitoring in all refugee camps. The partnership between the Gaia Association and ARRA was strengthened in 2006 and ARRA provided much on-the-ground support and advice for the smooth running of the programs. A total of 620 households were selected by ARRA to participate in the Clean and Safe energy program and, subsequently were trained on stove safety and handling by Gaia staff during two sessions; one held in June (300 households) and one in December (320 Households). The refugee committee participated in the drawing up of household lists. The selection of households included all sections of society at the camp, every clan and ethnic group.

**IV. Other Activities**

**4.1. Working with Clean and Green Addis Ababa**

There was an exhibition organized by this agency on December 21 2005 in Addis Ababa with the objective of sharing experiences and bringing agencies which work in activities that clean the environment. Gaia had the opportunity to exhibit and introduces the stove and its contribution to the clean environment. The stove technology and its impact on the environment proved very attractive to visitors. Gaia was also involved with Clean and Green Addis Ababa by helping to plant around 100 trees in a program organized by the agency.
4.2. Participating in the Partnership for Clean Indoor Air Work shop

The Partnership for Clean Indoor Air Africa Regional Commercialization Training was in Addis Ababa, Ethiopia from November 7 - 10, 2006. The objective of the workshop was to equip organizations with relevant and appropriate business skills to strengthen the commercial aspects of their household energy programs. That workshop was aimed at organizations that are managing operational stove programs, and producing and selling proven cooking/heating technologies to customers. Organizations were expected to have an initial understanding of consumer awareness and market development.

During the workshop, participants were introduced to basic business and marketing strategies through interactive breakout sessions structured according to the following themes: macro environment, customer demand & supply, sustainability and scale up. The workshop was including site visits to local household energy programs on GTZ and Gaia Association HH’s.

Partnership For Clean Indoor Air (PCIA) Bulletin, which is a quarterly newsletter provides updates on the activates of the partnership for Clean Indoor Air and its partners to improve health, livelihood and quality of life by reducing exposure to indoor air pollution, primarily among women and children, from household energy use. More than 120 governments, public and private organization, multilateral institutions, and others are working together to increase the use of affordable, reliable, clean, efficient and safe home cooking and heating practice. Gaia were participating on this quarterly bulletin under the title of IAP Study as an Educational tool in Kebrileyah Camp.

[See attachment 11: PCIA bulletin]
V. Limitations

- As Ethanol is a newly introduced household fuel people are not aware of this fuel. The experience of Finchaa on K-50 which 50% ethanol mixed with 50% kerosene with consequential accidents was a challenge for Gaia Association to clearly differentiate the misunderstandings.

- Finchaa is the only current producer of ethanol and it has a limited production per annum and this resulted to be subjected to the price they place. We hope this will be solved in a very short period of time with more production of ethanol in other sugar factories.

- It was not possible to reach more refugees due to budget limitations.