



Cup of Hope International

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*“And if you give even a cup of cold water to one of the least of my followers, you will surely be rewarded.”
Matthew 10:42 NLB*

CAMBODIAN VILLAGE PROJECT REPORT

JUNE 2009

Project Dates: April 24 -May 3, 2009

Cup of Hope International, in cooperation with Shanti Volunteer Association in Phnom Penh, launched a BioSand water filter project in the Villages of Khna Phtol (Village #1) and Trapeing Krasaing, (Village #2) Siem Reap Province, north of Ankor Wat, in a jungle region near the Thai border.

The entire team consisted of 3 members of CHI from the United States, 5 from the newly-formed CHI-Cambodia, and 2 members of the SVA. (See Appendix #1 for names of team members) After training the staff of SVA to manufacture a BioSand water filter, the team traveled to Siem Reap (7 hours from Phnom Penh) and another 1 1/2 hour to the villages for presenting the project to the communities, training to make the water filter, and following up with the village chiefs, community leaders and teachers.

We met with Village #1 on April 25, and Village #2 on April 26. The initial meetings with the villagers were quite overwhelming to the United States team. We soon learned that they had been told we were going to solve all their water problems, including drilling a new well, digging a deeper pond, and that the filters would be given away to each family! We immediately knew we were in over our heads, and that the process of creating a business plan in which the villagers would learn to become self-sufficient in cleaning their water would require huge amounts of re-education and time!

Meeting the Villagers

Village #1 - The villagers were waiting eagerly for our arrival, having set up tables and chairs and fresh bottled water for us. After introductions and greeting with the chiefs and community leaders, we introduced Cup of Hope to the villagers. Mr. Sopheak and ChanLeap translated for us. We immediately realized that the translation process and listening to English (many for the first time) was very distracting, and the Cambodian team members perceived this as well.

They immediately took over the speaking duties and did an incredible job of explaining what was to take place during the day, and what Cup of Hope's intentions were for this initial contact.

Village #2 - The nearly 100 people were waiting in a classroom of the new school. It was very hot, but everyone was excited to hear what we had to present. It was a big day for men, women and children alike. School was postponed until after the presentation, which proceeded much like the day before, with introductions and explanations of what they could expect from CHI.

The leaders and villagers were warm and friendly, and in both villages were eager to help in the manufacture of the BioSand filter.

Making the BioSand Water Filters

Village #1 - After about an hour of introduction and Q & A, Doun and Kheaw began showing the villagers how to make the water filter. They aptly explained each step, and the people got right into the work. The women sifted the sand and gravel, while the men learned about the mold and made cement. It took about an hour, and the filter was poured. During this time, we had more opportunities to talk about the use of the filter, health and sanitation issues.

On the morning of the second day, we dropped off Doun and Kheauw at Village #1 so they could remove the filter from the mold and bring the mold to Village #2. Not as many villagers were present, but the leaders and men who were going to run the businesses all were there. The filter in village #1 turned out well.

The making of the filter in **Village #2** began as soon as Doun and Kheauw arrived from Village #1, where they had removed the filter, and retrieved the mold. The process went well. More men were involved this time, and most of the school children watched intently, having had some training in health and sanitation issues in class, prior to our arrival.

It should be noted that there were already two Hagar* water filters operating at the school, however, one of them was plugged. One had too much sand, and the other not enough, and we were able to determine that not much education and training had been given the users when they were installed a few months before. *Hagar is a Non-Governmental Organization (NGO) operating in Cambodia. They sold two filters to the school in Village #2.

Removing & Charging the Filters

On the third day, we traveled back to both villages to charge the filters and continue to teach the villagers about their use. The morning was spent at **Village #1**, washing sand and gravel and charging the filter. We initially used water from the rainwater cisterns next to the school, and all went well. The village chief, Mr. Saveth, drank the water after it cleared and said he thought it was good.

In the afternoon, we removed the filter at **Village #2** and charged it as well. It had a small leak in one bottom corner, but we were able to patch it with some slurry. While waiting for that to dry, we checked the Hagar filters. The sand and gravel inside was black and looked much like paving material. We were not happy about that, so we decided to re-charge both filters. Afterwards, both filters began working very well.

Setting Up Initial Business Plan

Before leaving **Village #2**, we had a meeting in one of the classrooms with the Community Leader, Mr. Phan Narin, and several others, including the school principal and teachers. They agreed to try our plan and we shook hands.

In **Village #1**, we stopped to check on the filter, which was on the porch of the teachers' house, and it was already plugged due to the fact that someone had dumped the nasty pond water into it. (*See Appendix #2 for report on the pond water in the area*). We flushed it with cistern water, and went to the home of the village chief, Mr. Ren Saveth. After a bit of discussion, he also agreed that he would try to manufacture the filters for his village, with help from a couple of other leaders.

Note: Mr. Saveth has a well next to his house that was given to him by an NGO, so he believes he is set for water. His family bathes at the well, washes dishes and clothes, the animals use it, the kid play around it, and everyone drinks from it.

We made plans to return within the week to bring tools to both Villages, and to loan them a mold for 6 months.

Return to Phnom Penh - Modifying our Molds

Back in the city, we spent two full days finishing up the second mold, and modifying the first one that we had used in the villages. It was slightly out of square, and so one of the filter sides was too thin. We purchase tools and buckets for each village. Team member Dennis Eaves, welder/fabricator, was invaluable in helping the young Cambodian men at the Foursquare Tractor Factory learn to make our molds.

Return to the Villages

On Friday, May 1, we traveled again the 7 hours to Siem Reap. On Saturday we had appointments in each village to finalize the business plan and to leave them the molds and tools. At this point, ChanLeap was our only Cambodian team member and translator, along with our driver, Mr. Chenda.

Saturday morning we waited for Mr. Saveth at his home. (**Village #1**) When he arrived from an overnight trip, he was not interested in doing the business any more, having decided that if he waited long enough, another NGO would come along that could give filters to the community. ChanLeap began serious negotiations with him that lasted almost two hours, and in the end convinced him to at least try the plan. What finally changed his mind was her questioning about how many kids and adults had died last year in the village from bad water. He replied, "About a dozen." She said, "You already have a good well, but how many of your villagers have to die before they can have clean water?" His comment, "That's a good question!", and he agreed to try.

Another hour was spent figuring out the exact cost of the filter, including all the material and labor, and it was determined that they would be about \$7.00 each. Mr. Saveth owns a sand and gravel business, and when he realized that he could profit by selling the materials to both villages, he was lots more interested.

ChanLeap was invaluable in this process, already having had much experience in negotiating and facilitating with her own organization in Phnom Penh. She even challenged both villages to do a competition to see which village could make the most filters in 6 months, and then we could have a celebration!

The meeting in **Village #2** with Mr. Phan Narin and the others went much easier. They were interested and excited about the business plan, and were ready to try it. We met at the home of Mr. Narin, which also serves as a store and a clinic. ChanLeap laid out the plan, and it was signed by all of us. This village will sell their filters for about \$10.00.

It was difficult to leave both villages, having only spent a short time in each, and knowing that there would be many questions and potential problems that would arise after we left. ChanLeap and the others of CHI-Cambodia seem up to the challenge of follow-up, and as of June 1, 2009, have already made many phone calls to the villages to see how they are doing. (*See Appendix #3 for Follow-Up Plan*)

**APPENDIX #1
TEAM MEMBERS**

**APRIL 20 - MAY 11, 2009
CUP OF HOPE INTERNATIONAL**

CHI - USA

Michael Webb - Greeley, Colorado
Barbara Webb - Greeley, Colorado
Dennis Eaves - Lancaster, California

CHI - CAMBODIA

Tun ChanLeap - Phnom Penh
Khom Sokheauw & Khaan (Kheauw) - Banteay Meanchey
Ngoun Doun and Ghurm (Doun) - Mongkol Boray
Battambang Province

SHANTI VOLUNTEER ASSOCIATION -CAMBODIA

Mr. Vann Sopheak (Mr. Sopheak) - Administrator
Miss Sopheavy (Sofie) - Secretary
Mr. Huen - Teacher Trainer

PROJECT TIME LINE

APRIL 23-24 - Trained staff of Shanti Volunteer Association to make filter
APRIL 24 - Traveled to Siem Reap Province
APRIL 25 - Met Village #1 for Introductions, poured filter
APRIL 26 - Met Village #2 for Introductions and poured filter
(Doun and Kheauw helped Village #1 remove filter in am)
APRIL 27 - Removed filter from mold in Village #2, met with Community
Leaders and Chiefs of both villages
APRIL 28 - Traveled to Phnom Penh
APRIL 29-30 - Modified the mold and ran errands for return to villages
MAY 1 - Traveled to Siem Reap
May 2 - Met with Village #1 Chief in morning, checked filter operation
Met with Community Leaders of Village #2 in afternoon, checked filter
operations
MAY 3 - Traveled to Phnom Penh

APPENDIX #2
VILLAGE POND & WATER SOURCES REPORT

APRIL 20 - MAY 11, 2009
CUP OF HOPE INTERNATIONAL

Both villages had fairly new ponds dug near the school. But the villagers in #1 actually used water from a lake in the center of their neighborhood. About 40 families drank the water that was full of vegetation, and susceptible to all kinds of pollution. In the dry season, they don't have access to any rainwater or lake water, and have to have it trucked in at great expense. A few of the villagers share Mr. Saveth's well.

The newly dug pond was brown and turbid. The stuff did not settle when left in a bucket, and the water had an oily feel to it. We wondered if the stuff might be a type of algae, but did not have equipment to test it. Animals did not drink from this source, leaving us to believe that the water was really bad! This is the pond water that kept plugging up the BioSand filter. The stuff in the water actually made it all the way through the filter and out the spout, which is still a mystery. Mike is doing research through several resources to determine what could be the situation with this pond, and he will write a report soon.

The pond at Village #2 looked similar to the other pond, but the water actually was turbid from erosion and mud that washed into it from all the rains. This pond also dries up when the rain stops. There is a well next to the pond that does not have water - the drillers did not get deep enough to hit water - but the cistern at the well has rainwater in it. Cattle were drinking from it, and the students were pouring the water on plants and flowers.

The water in the BioSand filters came from the rainwater cisterns next to the school. People in this village use rainwater when they can, but must buy their water during the dry season.

Both villages need new wells, possibly deeper ponds, and more rainwater storage. And, of course, they need to filter water from all sources. Point-of-use water filters seem to be a solution, once the villagers learn to manufacture and properly use and maintain their BioSand filters.

APPENDIX #3 VILLAGE FOLLOW-UP REPORTS

**APRIL 20 - MAY 11, 2009
CUP OF HOPE INTERNATIONAL**

Before we left Cambodia, we heard that Village #2 was already having trouble with the mold. They had made three filters, but the third would not come out of the mold. They did not have any idea what the problem was. They were becoming discouraged. ChanLeap had suggested to them that they use more oil; and she also said that possibly Doun could bring them his own mold to borrow for a while. However, that will require a trip for Doun from Battambang, and he is planting rice at this time.

Our most recent report from ChanLeap came on June 1, 2009. She says:

“ . . . I called to the men in Trapeing Krasaing and Khna Phtol. Mr. Rensaveth making five water filter and he will take it to communities' house tomorrow. There are only two house buy this filter first, and most of the communities they want to buy too, but they don't have money. Mr. Rensaveth try to convince them and explain them about the benifite of water filter and he sale in good price than Trapeing Krasang village.

In Trapeing Krasang, still have problem with mold. I asked the group leader to survey for the iron work in Seim Reab if there are any place that work with iron, I ask him to take the mold to fix there, and I will pay for his expen in fixing it after the filter good and I go to visit him in the 2nd week of June or 4th week of June.

Other choise, I asked Mr. Ren Saveth to borrow his mold for Trapeing Krasang about one month after he make it about 30 to 40 filters. He has agree and happy to cooperat.

I called to Mr. Sopheak too, SVA staff will going to SiemReap in June to visite and check their project with visitors and he said it is very difficult if I want to go with on that time. But if I go the the library's staff is better. I'll try to contact with the library's staff and set the schedule with them. If could not I will go with Bong Doun one day in June.”

We have several new ideas which we will suggest to ChanLeap this month.

1. Central Distribution Station - The businessmen could set up a central location where they manufacture the filters. They would continue to sell and distribute them to individuals, and teach them how to use and maintain them.

In addition, others, possibly women who need work, could work with several BioSand filters that stay at this location, operating and maintaining them. They could collect the filtered water in disinfected and sealed containers to sell to households that do not have a filter. People could bring their containers back to the CDS for disinfection and refilling, and pay a small fee for each step of the process.

Both the manufacturers and the women would be available to answer questions, to educate about hygiene and sanitation, and to promote the proper use of the filter, both at the Station and at the home.

APPENDIX #4 POSITIVE AND NEGATIVE ASPECTS OF THE VILLAGE PROJECT

POSITIVE:

1. There was an understanding in the villages that they need better water.
2. They understood that sickness and bad water were connected, probably because of the schools' education process.
3. Both villages had a community spirit - they were interested in what was good for the whole community - almost tribal in some ways.
4. Impressed by the leadership in Village #2 and their concern and responsibility for the welfare, health and future of their village.
5. Willing to invest time and energy for the overall improvement of the village.

NEGATIVE:

1. It is unknown to what an extent they are willing to sacrifice to get clean water.
2. Village #1 - Leadership did not completely empathize with the situation that the rest of the villagers were in. Seemed more interested in dollars, rather than the pressing need of health and clean water for the children and the elderly.
3. Concern for the people in Village #2 during the dry season - we need to fund and drill a well in the village as soon as possible.
4. Not enough time spent in villages. Need to be there long enough to make sure that the manufacturers totally understand the entire process, and can do it on their own. Time to answer questions and troubleshoot initial problems. Need to be there to build confidence and relationships with villagers, leaders and manufacturers. Suggestion: Stay at least a week and work every day with the villagers.
5. Need time to educate about hygiene and sanitation, and the process of changing cultural habits is long and tedious, but very necessary! Must be willing to put the time and energy into this aspect of the project.
6. Easy to assume that every understands and "gets it."

WE NEED TO LEARN TO PUT ASIDE OUR AMERICAN MIND SET AND THINK IN TERMS OF THE CULTURE AND PARADYM OF THE VILLAGERS. It is as hard for Americans to change as it is to change the thinking of another culture! It works both ways!

FINAL NOTES & SUGGESTIONS FOR THE FUTURE

1. The business plan that we set up with the Villages includes loaning them each a mold for 6 months, giving them a bucket of simple tools and \$50 start-up loan.
1. The Foursquare Church in Cambodia offered to give a well-drilling rig to Cup of Hope, and we are assessing our financial ability to operate and maintain it.
2. Pressing need for translation of BioSand Filter manual into Khmer, and for educational materials in hygiene, sanitation, and the BioSand filter for the schools.
3. Need instructions for use and maintenance of the filters to be written in Khmer and either placed on the filters or given to each family that buys one. Picture versions of the instructions would be helpful, since many of the adult villagers don't read.
4. Need for fund-raising here in the States to "adopt" the two Villages in Cambodia. (Future trips, wells, ponds)
5. Funds needed for further training both here in the U.S. and in developing countries around the world, and for ways to let mission agencies and organizations know about our vision and plans.
6. Need to re-educate those of us who think according to the "American cultural way of doing things." We are used to solving problems by giving goods, materials or money, by sending short-term teams, and in general providing relief for the problem short-term. Instead we need to begin working on ways to help developing countries become self-sufficient and non-reliant on foreign influence and donations. Their future depends on this!
7. Our follow-up trips need to include more time in each village - possibly one to two weeks at the least - to make sure that the filters are being made, that the manufacturers understand the process, and that they can charge and maintain them, and that the communities have a good idea of how to use them. In this way we can build stronger relationships, and more confidence in the people about the viability of the BioSand water filter. We suggest that we have an American team of up to 6 persons at a time, with one or two Cambodians for each two Americans for translation and relationship.

**CUP OF HOPE INTERNATIONAL
CAMBODIAN VILLAGE PROJECT**



Training the Shanti Volunteer Association Team



Mike and ChanLeap

**CHI TEAM
MEMBERS**



Dennis and Mike



Mr. Sopheak, ChanLeap, Mike



ChanLeap teaches Village #1 about hygiene



Kheaw encourages villagers



Village #2 is eager to start!



Making the first filter in Village #2



Pond water - only source to drink



Washing the sand to put in filter



Removing the filter from mold



Young boys watch intently.

**CUP OF HOPE
CAMBODIA
MEETS IN PHNOM
PENH**



**Clean water for the
Next generation!**