

journals09

- [Allison Reiko Baugham](#)
- [Amelia Symonds](#)
- [Anastasia Rudenko](#)
- [Eladio Lopez Rodriguez](#)
- [Haley Viehman](#)
- [Heather Reed](#)
- [Henry Zeng](#)
- [Jeffrey Katz](#)
- [Julia Schoen](#)
- [Kellie Kress](#)
- [Kevin Kircher](#)
- [Ling Cheung](#)
- [Nadia Siles](#)
- [Po-Hsun Lin](#)
- [Rustom Meyer](#)
- [Sarah Long](#)
- [Wenqi Yi](#)

Allison Reiko Baugham

Thursday, January 15th, 2009

After a group reflection we were allowed to explore on our own. Nothing too exciting--souvenirs, baleadas, machetes. However afterward we were given several options of things to do that afternoon. I opted to go to the Marcala Plant & then hike to the water source. Being the eager students we are, we raced ahead and left behind those that actually knew the way...We traveled through a coffee plantation and spoke to people along the way, trying to ask for directions. More or less we were headed in the right direction.

Soon we stumbled on an old mud house and met a man. He had missing teeth, a dirt floor, and the biggest smile you could imagine. It was amazing to see someone live so comfortably in a place so remote and separated from the rest of the world; or so we thought.



We thanked him for speaking with us & hiked further to find the water source. We eventually came to the river and decided to head back since it was getting dark. When we passed the man again he invited us into his home & shared fresh plantains with us. We offered to give him money and he refused, but we did it anyway (good deeds are lost on Americans, it seems). He then told us about an accident in the U.S. involving a plane. Little did we know that he knew more about world affairs than we did!

I really wish we could have had more time to speak with him, but being the apprehensive person I am, I couldn't keep people waiting. To think if we had waited and took the correct path we would have missed this opportunity. It was such a wonderful experience and has really summed up my trip to Honduras: people can surprise you, there is a beauty in simplicity, and what makes people happy can redefine the way you will live the rest of your life.

Amelia Symonds

I really wanted to be able to write a great entry that expressed everything we saw and all that I felt, but after mulling over this and having several false starts I have decided instead that everyone should go to Honduras! This is not the most practical approach, but I could spend hours writing and still I don't think the effect would be half of what I wanted to convey and it wouldn't be entirely due to an inability to articulate things well.

Kelly and I spent our first home-stay together with the Zelaya family in Tamará, and while the first night was filled with mostly courteous smiles and head bobbing on both ends, we soon found ourselves plopped on the couches discussing everything from Honduran slang- "La comida de Doña Arena es muy macanudo"- to immigration and water quality. I was impressed by how open everyone was to discussing just about anything, and I am grateful for this because I think through this we learned a bit about the lives of the people we are working with and why AguaClara is important.

Before going to Honduras I enjoyed AguaClara and found it all very interesting, but I think now it is something much more real and not just a design in CAD or on a piece of paper. A family across the street from where we stayed lost a child because of poor water quality and hopefully now, because of AguaClara, that won't happen again. I had heard the statistics but I think now there is a face that belongs to that number.

I think every once in a while something, whether it is a person or experience, comes along and leaves a lasting impression that sort of makes one pause and think. This trip to Honduras has definitely been like that for me. The people I met, both Hondurans and Cornellians, were all engaging and curious in the own way. Honduras itself is a beautiful place with a beautiful culture and people and I find myself wanting to contribute or help if I can, and if I can't to learn from those who can. I come back to classes excited to be an engineer and eager to see where it will take me and what opportunities will arise.

Anastasia Rudenko

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My original plan to document every day of the trip on the long van rides that took us over the mountains almost daily was hampered by the inability to write on Honduras bumpy, often unpaved roads. Frequently parts of the 'highway' were wiped out with only a large pile of rocks piled before the missing section to warn oncoming traffic to slow down or swerve swiftly to avoid dropping off an impending precipice.

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1/3/09 - Within our first hour in the country San Pedro Sulas power cut out. When we left the airport the building was being powered by its own generation system. The first gas station we pulled up to was non-operational due to the loss of electricity. These two experiences, encountered so soon after arrival, reinforced the problem of trying to design a treatment system in a country with very intermittent energy sources.

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1/9/09 - In one of my favorite parts of the day we discovered that our van had a flat tire and a spontaneous dance party erupted in the parking lot between the Hondurian students and us as punta music blasted in the background from the cars speakers.

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1/10/09- The debut of AguaClara International! where 'beautiful American women and ugly American men' battled local teams at the Quatro Comunidades Health Fair.

Eladio Lopez Rodriguez

La verdad que no es una tarea sencilla tener que elegir tan solo uno de los estupendos 15 días que pude disfrutar en tierras Hondureñas. Quizás por aquello de salir un poco de la tónica general, voy a salirme un poco del guión y voy a elegir el día en el que tuvimos la oportunidad de conocer las ruinas de la antigua ciudad maya de Copán.

Amaneció un cielo un tanto cubierto, era el primero en el que el sol no nos daba los buenos días desde por la mañana, hecho que al cabo de los días nos pudimos dar cuenta que era habitual. Desayuno de copos de maíz, y leche acompañado de algún dulce típico. Era el primer amanecer de verdad, pues el anterior no pilló a bordo del avión. En una preciosa terraza del hotel, en la cima de la colina de la ciudad de Copán desde se podían contemplar todos los alrededores.

Una vez desayunados, nos montamos en las furgonetas, rumbo a las ruinas a unos diez minutos. Ésta era una de las visitas que más esperaba, antes de la visita me documenté un poco antes buscando sacar un poco más de jugo al día. Quizás por la curiosidad que ya hace tiempo despertaron en mí las culturas precolombinas debido a un concurso, y también por todo aquello que se encontraron los españoles cuando por aquel entonces nos dedicamos a hacer un montón de tonterías en vez de valorar ante las maravillas que teníamos enfrente.

Un buen guía, con un buen inglés que nos hizo un muy interesante recorrido, más tarde quizás se aprovechara del tirón para sacar tajada, no lo sé. Pirámides, estatuas escalinatas, caras, pájaros, túneles, tumbas... y un montón de raíces, especialmente de Ceiba, que durante más de medio siglo fueron las únicas que conocieron este lugar.

Después de una mañana llena de paseos y escaleras, acabamos comiendo en el restaurante del parque. Más tarde no enteraríamos por Tamar que desaprovechamos la oportunidad de visitar el museo (la siguiente ocasión). Al final del almuerzo nos esperaba una fugaz visita al parque de las aves, demasiado rápida para mi gusto, pero bueno, así fue y no le vamos a dar más vueltas. Seguida por un paseo a caballo por los montes de los alrededores, que sí que mereció la pena.

Una cena a base de baleadas y tortillas, con una excelente conversación, que me ha hecho reflexionar bastante sobre muchas cosas. Más tarde tuvimos la oportunidad de dar una vuelta por la noche y tomar algo, estuvo bien, pero el sitio más se parecía a un bar de estados unidos que de honduras.

Y con esto se acabó el segundo día, uno de los mejores a mi parecer.



Haley Viehman

This was definitely one of the best trips I've had, mainly because of the people involved. All the people I met were amazingly friendly and interesting (the Cornell group, Agua para el Pueblo (Antonio), our two wonderful van drivers/guides Jorge and Leopoldo, our host families) and it was really nice to see Tamar and John again. I think living with families in the towns we visited is one of the most important aspects of the annual AguaClara trip to Honduras. It gave me a much better understanding of the people and culture, which is not something you can necessarily get in a hotel room. The hospitality of our families (and most of the people I met there) was overwhelming. I've never experienced anything quite like it here in the U.S. Many of us had the experience of sleeping in the best room of our host's house, while the entire family piled into another one. I enjoyed long talks with my family in Tamara, who were all genuinely interested in me, my family, my university, what I study... etc. I spent the first night in Rio Frio in the Cuatro Comunidades being herded around under the full moon by a mob of 30 or so children, stopping in at each house on the street to meet someone's friend or cousin, and being invited to come in, sit down, and eat something every time. That was a lot of fun, and I think I met half the town through the kids alone. I got to spend the next day playing with them, too, at the Health Fair. Though it was extremely exhausting, I am really happy that the fair was such a success! But I'm also extremely embarrassed for not knowing anything about soccer when the announcer decided to interrogate me over the loudspeakers. Where was everyone?!

Though visiting the various AguaClara plants and other water-related sites was the main point of the trip, I am glad we filled it in with extra activities, like the Mayan ruins in Copan, visiting CEASO, and talking with the women from the maquila. CEASO was probably my favorite one of those activities, and I am now convinced that lime and ash really is the solution to everything. Maybe we should try it in the pilot plant? 😊

Heather Reed

As someone who has never been out of the country, the trip to Honduras this past January was an experience that I will never forget. Instead of describing our daily activities and my experiences, I think it would be better to talk about my favorite parts of the trip and the parts that affected me the most.

What I learned the most in the two weeks I spent in Honduras was just how much someone can give. Everywhere we went, I was surrounded by people who were willing to do anything they could, no matter what they had or didn't have, to help. My host families were some of the most generous people I'd ever met. They gave us their beds, they cooked for us, and when I got sick, one woman made me a chamomile tea that was supposed to be soothing for my stomach. It was so refreshing to be with people whose first thoughts were to make me feel comfortable instead of people who think about themselves first. Even our translator/van driver, Leo, was amazing. He did not have to do anything for me, but when I got sick, he pulled strings to get me a doctor's visit, and he would bring me medicine and gatorades every morning. During one of our conversations, I learned that he went to high school and college in the United States. When I asked him why he didn't stay in the United States to work, he explained that it was his duty to take what he had learned and apply it to life in Honduras. He said it was important to not think just about being the most successful person you can be but to make sure you are betting your world with what you've learned. Honduras was full of people with this mentality.

I also learned a lot about water treatment. We saw a lot of different plants. A LOT of different plants. From AguaClara plants to high-tech plants. Before the trip, I thought I understood why it was important that AguaClara technology be robust and easily fixable if something goes wrong. Actually being at the plants and talking to the families who benefit from them, however, completely made me realize the necessity that these plants be robust and easily manageable. When the technology works, but it's too difficult for an operator to manage, the plant doesn't work to its potential and it becomes disappointing for us because we feel like our hard work isn't working but also for the families who expect clean water and aren't getting it. For these reasons I'm so motivated to make the AguaClara technology the best it can be.

Henry Zeng

All experiences are measured by the emotional and the physical. Both are no less visceral.

Words cannot describe how amazing an experience it was. Gracias por los recuerdos.

Memories Become

Memories become
Distant raindrops
As the tempest
Continues
Drips
Splashes
Runs-off

My memories though
Fleeting they are
Measured not by time
But by moments,
Encounters,
Friends

Rain drips
Splashes
Runs-off
Flows
Floods
Into my heart

To cleanse, refresh, quench
With purpose
Belief
Understanding
Empathy

Water, water everywhere
And not a drop to drink
Not drink, but quench
A thirst
That which I had not known

To touch a distant soul
To let the water flow through
Your blood, veins, heart, tears
To know we all endure
The common tempest

But for a fleeting moment
Clouds part
And rains cease to drench
But quench instead
Never forget

Memories
Are measured
Fleeting by
The briefest moments,
Synapses
Which contain the tempest
That quenches our thirst
For purpose, belief, faith

For now
Only the rain
Drops
Drips
Echoes
Splashes
Fades
Visceral
Precious
Never forget

Memories become
Distant raindrops
As the tempest
Continues
Drips
Splashes
Runs-off

Jeffrey Katz

From Day 5: Tuesday, January 6th

Although we've had three days of four hour van rides this is the first time I've felt like I've had any time to write in my journal. And it's definitely an appropriate time after tonight's reflections.

Thus far we've hopped from New York to San Pedro Suelo, to Copan, to Gracias, to Siguatepeque where I lay now in a bunk bed beneath Po-Hsun writing in this journal and sampling vino joven de Mesa, from the CEASO ranch. In this time we've seen two treatment plants, chlorinated cisterns, natural "wells", have ziplined a length of 5 kms over the canopy of Copan, explored the Copan ruins, and ate several reiterations of rice, beans, eggs, and tortillas. And this banana flavored wine is harder to stomach than the aforementioned. "Ugh, terrible," says Chris. "It's not that bad says Julia."

The people of Honduras are all really welcoming and pleased to have us there. My elementary Spanish is enough to communicate with some efficacy. Not being proficient however and the different tonalities of Honduran speech make it difficult to gauge emotion, but mainly truth in speech. (Ed: I go on to discuss the mayor of Copan who says he doesn't care about politics just only what's best for the people. I wishfully agree with him and if he's legit then I'm anxious to start designing for them but when the words come through a translator it's hard to gauge if he's just being a good politician.)

Our first water related stop was in a village with no treatment, just literally a hole in the ground. Still there are smiles on their faces. They "know about chlorine" and the need for clean water, but they still believe what they have is fine and that they can continue to drink it. The weird thing is, they probably can. Which cannot be said for us and the banana wine.

I can see why the people here can see why they don't need treatment plants. Especially when a plant can be dropped in from Spain, with high technology, but only runs at 1/2 capacity or when the power turns off at the plant and nothing comes out of the tap. Kids get sick without clean water but there is "no data" clearly showing this so when people cite that "less kids have diahrrea" we can only believe these reports instead of like good engineers looking of the numbers that say "200 cases in 2007 before AC, 50 after the plant. Woo hoo!" Still, numbers, charts, and tables may not appeal to the people that have drank water that looked like chocolate and lived to tell about it if it costs them less to have an ecru alternative. Hopefully when we get to AguaClara plants we see clear results (and water) and hear the people talk about their experiences before and after (once again, hopefully) clean water.

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Editor's note: The wine was for cultural and educational purposes as it was locally and organically made at CEASO.

Julia Schoen

Every time I travel I'm a little disappointed that I can get between two places so quickly--- hop on a plane in sunny San Pedro de Sula and five hours later I'm faced with the reality of how inappropriate my sandals are at two in the morning in January in New York. However, while the change in weather is annoying it's not my main complaint, I need more time to digest an experience than modern air travel allows for. One week ago I was attempting to punta in a room full of new friends and now here I am fully back in the Cornell grind. Finally I'm going to take a moment to digest my Honduran rice, beans and most importantly water to see what comes out in this journal. (Excuse the bodily functions metaphor, but I feel like I couldn't talk about the trip without mentioning bodily functions at least once).

When asked about my break by my friends on campus, I have a very hard time wrapping up our trip into a few nice phrases. "Oh, Honduras was sooo awesome!" just doesn't seem to cut it. I can't quite convey waking up in the morning ~~---after being kept up all night by roosters---~~ to a cold pila of water before running by Jorge diligently cleaning his already spotless van. Nor can I quite describe the twinkle in his eye when he said good morning and asked me why I looked so weighed down when I ran. "Raise yourself up" he kept telling me. I couldn't keep anyone's attention long enough to describe each pothole in the dusty bumpy roads Anastasia and I ran along or each close escape from the jaws of a feral Honduran dog (or goose) we made. At this point, I haven't even gotten to breakfast! Mmm... fried plantains.

If I have to sum the trip up, overwhelming is the only good word I can use. Not in a bad way- I was overwhelmed by good hardworking inspiring people who continue moving forward despite a complex difficult socioeconomic situation. We visited a lot of treatments plants in Honduras that implemented many technologies to varying degrees of success. Our host families dealt with issues that I usually only hear casually discussed over coffee in the US. Both families had fathers or sons supporting them illegally from the US. It was eye-opening to meet these caring generous people and hear their stories.

In the four communities we worked at a Sunday afternoon health fair. Before the fair we spent the afternoon walking around the communities inviting members of each household. Sarah, Nadia and I took turns asking at each household. At first I was intimidated to invite people. Sarah and I would listen to Nadia's fluent Spanish invitations and try to pick out phrases for our own speeches. I came up with a strategy for each turn--- practice, look the person in the eye, speak rapidly and confidently, and get out before they ask questions in Spanish that I couldn't answer. I'm pretty sure this strategy will serve me well in the future. When it finally came time to turn back for dinner, I had an awesome invitation spiel and I didn't want to stop.

The fair itself was interesting. With the dancing, games and futbol the fair had that same sunny afternoon friendly fun feeling I remember from fairs when I was younger. However where my own childhood fair memories consist mostly of inflicting brain damage on goldfish and sticky cotton candy this fair had tents with a pharmacy, doctors and information about clean water.

Getting to go to Honduras and see the wide variety of the country that we did was an amazing reminder of all the opportunities at our fingertips at a university with so many resources like Cornell. We saw what the hard work of APP and members of Aguaclara have accomplished. Each plant had obviously improved upon the last. Still, we drank water from a bottle right in front of the water board in Tamara and saw floating flocs in our plants. Obviously there is still much work to be done. It was easy to be inspired by this trip. I hope that coming back, having seen what is possible in Honduras, I can use the energy and enthusiasm from the trip to work towards something worthwhile.

Kellie Kress

Friday, January 16th, 2009

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I think our last day in Honduras was one of my favorites. I ended up riding in the truck with Antonio, Heather Hunter and Henry. Since we had to make a stop at CEASO to drop off the key someone had accidentally take and pick up Lalo's dob kit(which really looked like a clutch purse), we were separated from the group for the afternoon.

As we drove from Marcala to San Pedro, the landscape was beautiful. We could see trees and fields everywhere we looked, which doesn't sound all that special, but there was so much green! I guess I'm just used to seeing so much gray: from cement, from smog, from exhaust. We drove past some people by the side of the road, so I asked Antonio what they were selling, and he replied "sandilla," which Heather then translated: watermelon. He asked if I wanted one, so we stopped at the next one we saw.

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After a few more hours in the car, we went to these caves that were pretty cool. Henry almost died by stalactite... just kidding. They had all these lamps so that we could see where we were going, and little plants had started to grow near them! We also encountered a bat!

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For lunch, we stopped by a restaurant overlooking a lake. Antonio picked out three fish for us from a cooler of frozen tilapia, and then they fried them for us! After lunch we stopped by the side of the road to eat our watermelon! It was delicious! We had a great view of the lake in front of us, and the most vibrant green foliage on the mountain behind. We confirmed that I can throw watermelon rind much further than Henry, despite his several attempts to prove otherwise. After returning the knife and some watermelon to the woman, we were on our way. We stopped somewhere to wait for the rest of the team, but managed to keep ourselves busy in the meantime.

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Kevin Kircher

1/4/09

As I refreshed my inbox one last time before heading out to a friend's house (9pm on New Year's Eve), I saw a message from Monroe Weber-Shirk about the AguaClara trip to Honduras. Apparently another student had been unable to get a visa, and had therefore withdrawn from the trip at the last minute - and here Monroe was, calling for students to fill his place. The catch? I'd have to be in Ithaca in just a shade over 36 hours. I had just arrived home in Milwaukee, and had been planning to stay for another week visiting family and old friends - but this opportunity was too much to pass up. So I picked up the phone started calling airlines about one-way tickets to Ithaca...

...and 36 hours later, sleepless but excited, I boarded a bus full of strangers and casual acquaintances (all of whom would soon grow to be friends) bound for JFK, San Pedro, las Ruinas de Copan, and beyond.

Today we took a trip up dirt roads to a small village (~7 families and ~45 people) up in the hills. The people there live a very simple lifestyle, depending on springs for their water and subsistence agriculture for food (supplemented by the scant living they eke out by spending staggering amounts of time picking coffee). The houses are of adobe or cob, the roofs stained black by long hours of smoke exposure from indoor cooking fires. We saw the springs and the simple distribution network - that is to say, hoses - they depend on for water. The system delivers good water most of the time, but in the height of the rainy season, runoff from above brings contaminants that can cause sickness in the village.

There were certainly ways the community we visited could be improved - the people had digestive problems from bad water, respiratory problems from smoke inhalation, problems with abysmally low wages and young ages among the coffee pickers, and so on. But they seemed happy, friendly and welcoming - and are there not a host of problems with our own "modern" way of life?

I found today's trip humbling; it made me think about the pitfalls of arrogance and ethnocentrism in "development work," and how I will have to struggle to avoid them.

Lina Cheuna

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The trip was super!!!!

Fill of fun and knowledge!!!

Throughout the journey, I wrote in my journal to remember all the events. Every moment is valuable.

[Friday, January 2, 2009](#)
[Saturday, January 3, 2009](#)
[Sunday, January 4, 2009](#)
[Monday, January 5, 2009](#)
[Tuesday, January 6, 2009](#)
[Wednesday, January 7, 2009](#)
[Thursday, January 8, 2009](#)
[Friday, January 9, 2009](#)
[Saturday, January 10, 2009](#)
[Sunday, January 11, 2009](#)
[Monday, January 12, 2009](#)
[Tuesday, January 13, 2009](#)
[Wednesday, January 14, 2009](#)
[Thursday, January 15, 2009](#)
[Friday, January 16, 2009](#)
[Saturday, January 17, 2009](#)

Nadia Siles

I am not the "dear diary" type of person so my "journal entry" will be a list of comments or sentences I bulleted in my notepad.

"The curious case of Heather Reed" Cuatro Comunidades

Poor Heather was sick throughout most of the trip. Even now we don't know what got her, some say it was the Gracias fish. In any case, with Heather, I experienced the true Honduran hospitality at Tamara and Cuatro Comunidades. It was surprising just how hospitable our home-stay families were, considering we were foreign strangers. Both families were always trying their best to accommodate our needs. I will not forget what our home-stay father in Cuatro Comunidades said "Ustedes son como mis hijas adoptivas. Mi casa es su casa."

"Patented technology leads to Honduras's dependence on the global north i.e. France. Must push floc blanket research!" Tegucigalpa

I believe the only time I felt anger and frustration during the trip was when the engineer at the Tegucigalpa water plant told us he couldn't discuss the details of the treatment process (in particular the re-suspension of the floc blanket) since it was patented French technology. The cherry on the top was when he informed us that replacement parts could only be purchased from the French company even if these parts could easily and cheaply be manufactured in Honduras. Talk about enriching oneself at the expense of the poor.

****Editor's note:** No resentment towards the French, the company that sold the technology just happened to be French.

"The meeting with the mayor was a political dance, hopefully we are the ones leading." Gracias

What can I say, at these meetings a lot is said but not every thing is translated into an "action." Despite this, it is important to keep hope and give people the benefit of the doubt. In this particular case, I hope the mayor is personally committed to the project and is willing to set-up before he is replaced.

"Los Tres Mosqueteros!"

Jamas me olvidare de los tres mosqueteros de AguaClara'. Antonio, con su mirada pensativa, siempre esta dedicado a la absorcion de informacion presentada. Leopaldo, con su contagiosa sonrisa, siempre nos estaba animando con sus historias. Por ultimo, Jorge, como el gallo mas gallo, cuida de todos nosotros como si fueramos sus hijos y nos demonstro que la sabiduria brota de nuestras experiencias y no de libros. Por eso y mucho mas, gracias!

And from the cornelian engineers living in Honduras I...

1) learned to be practical:

Me: "Can we drive up there? Sarah is wearing sandals."

John: "Looks at Sarah"

"You can't walk in sandals?"

2) was reminded of how great it feels to give and not expect anything in return:

Tamar: "I want to buy a cake for everyone that says 'Farewell AguaClara'"

The cake was also used for other purposes

Tamar: "We should take the cake as a peace offering..."

Now, lets all punta!

Po-Hsun Lin

People worried about getting sick in Honduras, fortunately or unfortunately, I got sick before the trip... The first day traveling of bumpy Ithaca limo, red eye flight, and rough roads in Honduras was really painful for me. My heart, however, can not help expecting the adventure in Honduras.

Copan

After half day and one night rest, I felt much much better. Copan was home to the Mayan People, who are thought to have arrived in Honduras as early as 1000 BC. Copan is a famous tourist place because of the Archeological Park of Copan Ruins (Mayan civilization). In the park, there are many beautiful and spectacular Mayan hieroglyphic stairways, inscriptions, stelae, and sculptures. Standing on the top place and watching around the spectacular views opened my mind and heart. I was ready for the trip!!

Some of us went to rappelling trip (zip line) after visiting Copan ruins. That was really exciting!! The total distance we rappelled was 5 km and the longest one was 1 km. I felt like a bird when I "soared" between mountains.

Before we left Copan, we want to visit Copan water treatment plant, SANNA, which was our first treatment in our trip. This plant was from Spain and is a packaged plant including rapid mix, flocculation, sedimentation (upflow), pressurized filtration, and chlorination. The operator is well-trained and talked a lot of details about the plant. This was the first time I saw the packaged plant.

Gracias

We only spent one day here. There is not water treatment here so we came to see the distribution tank and the potential site for plant. We also had a meeting with Mayor and some staffs in Gracias to talk about the possibility and the future work about the plant. Time to hot spring!! Although the spring was not as hot as I wanted, we still enjoyed very much and relaxed at that night.

Siguatepeque

I was very impressed when we visit a new-built SANNA water treatment plant in Siguatepeque because it employs many advanced technologies. For example, the filter can be automatically backwashed based on the increased head loss and the backwash includes water and bubble to decrease the usage of backwash water. Of course, the whole plant is controlled by computers.

That night, we slept in CEASO sustainable ecological retreat center (Centro DE Enseñanza_aprendizaje DE Agricultura Sostenible). The owner and his family grow various types of organic plants, raise poultry and livestock, make organic fertilizers by animal manures, produce methane by anaerobic digestion of manures, store rain water through roof, and use their tech to make low cost but high strength building materials. In this place, I saw much stuff that I only studied in the book. That was the first time I saw raw coffee beans, and he flamed the methane generated from digestion. I admire the owner because he not only keeps training and educating many people but also popularizing sustainable agriculture. I got a valuable lesson here.

Tamara

We started living with our host family in Tamara (3 days) and 4 communities (4 days). Lalo and I lived with a small family (3 members). Lalo is a Spanish native speaker, who can translate for me, with no Spanish ability. The couple is very nice and enthusiasm and they have a 3-year-old son who is very cute and outgoing. Other people in the town were friendly, and they usually greeted us with smiles. During the stay in Tamara, we visited Tamara, Ojojona water treatment plant which employed AguaClara technologies, and SANAA Los Laureles plant in the capital, Tegucigalpa. This was my first time to see small scale AguaClara water plant which was just like what I learned from class. It's always exciting you can see something in person that you've learned from textbook or somewhere, and compare to each other. Both plants in Tamara and Ojojona have the same problem, floating floc. On the surface of the sedimentation tanks was a layer of floating floc which may flow into the clarifier collector and deteriorate effluent quality. I guess this topic will become the priority issue for AguaClara team in the new semester.

Tegucigalpa is the capital of Honduras. We only drove there to visit a SANAA plant and Picachu Statue. The SANAA plant there is worthy of the best water treatment plant in Honduras. They have already combined floc blanket tech in the bottom of sedimentation tank. In addition, their well trained operators, modern analytical instruments such ICP, GC and AA also impressed me.

4 communities

People in four communities were nice as well. John Erickson was my roommate during these four nights. The place we stayed didn't have bathroom so we have to walk for 5 minutes to Jorge's house. Moreover, an AguaClara water treatment plant was under construction there and expected to be done in February 2009, so before that their water was chlorinated only. At that moment, I felt lucky to live in Taiwan or Ithaca.

First day we were helping prepare Health Fair. We went to knock on doors to invite residents to the fair. I thought the Health Fair next day was successful because many people and children came, and they were interested in the AguaClara demo plant introduced by John and Antonio. We played with kids and also had a soccer game with a local team. We lost (1:2) but we did a good job, I thought.

We had a brainstorm meeting with APP staffs and Jacob (director of APP). They mentioned that the biggest problem they have is to get funding. What I thought was they can cooperate with universities in Honduras and collect public health data before and after building water treatment plants so they are able to convince people in those places lack of clean water to build one, as well as those reviewers who can approve their proposal.

The last night in 4 communities was a great one!! The host father, Jorge, held a dancing party in his house. Although I didn't know how to dance, those teenager girls kept grabbing me to the pool. Thank our dance master, Nadia, she is great and taught us lots of moves. I learned 5, haha. Thank Heather H, Hulia, Kellie, Anastasia, Kevin, Chris and John for your good dance. It was very fun.

Marcala (Produces the best coffee in Honduras)

Before driving to Marcala, we visited a three stages filtration plant in San Pedro de Tutule which was technically and financially supported by Germany. According to the operator, this plant didn't use flocculation and sedimentation, can handle maximum raw water turbidity of 300 NTU, and easy to operate and maintain. I was happy to this multiple stages gravity filters.

Like Tamara plant, Marcala water treatment plant had a floating floc problem and could be worse than Marcala. We spent some time cleaning the floating floc and tried to troubleshoot this problem. I guessed we can raise the water level to decrease the chance that floating floc flows into clarifier collector and reverse the collector. But the most important is to solve the floating floc.

Postscript

I am very happy that I join this trip. I met and knew different people, saw and experienced a totally different culture and country, and learned a lot. It's a wonderful trip. Thank our good leader, Monroe, for arranging this trip, and Juanita, to take care of us. Thank John and Tamar for working so hard to prepare the trip. Thank Leopoldo, Jorge and Antonio for driving, translation and helping us. Of course, thank all AguaClara partners for having the fun time with me. It's my pleasure to travel with you. I will always remember this valuable experience in my life.

Rustom Meyer

Tuesday, 6 Jan 2009

Visited SANAA water treatment plant in Siguatepeque. It was like a poster for the need for appropriate technology. It was overall a good plant, but they wasted a great deal of potential energy, and used a lot of pumps at a high electricity cost. Also, one of their mechanical mixers was broken, and they had already waited like a month for a replacement (that was due to the plant being under warranty by the builder as much as supply chain difficulties).

Later in the day we went to CEASO, and had lunch and a tour. At first I must admit I was not impressed. Their main room/dining hall/meeting room /environmental education center reminded me of nothing so much as a Boy Scout campground. But the real reason for visiting the place was not inside. On three acres of farmland, CEASO was pretty much self sufficient, and they used everything for something. Anything that one would normally think of as a byproduct or waste was turned into a resource. The kitchen and agricultural wastes were fed to penned animals (a cow, pigs, goats, and chickens). When their pens were washed, the animal waste went into a giant plastic bag, which functioned as an anaerobic digester. The methane generated in that bag was piped back into the kitchen for use on the stove. The digested liquid from the bag flowed out into a worm compost heap, which used that and more scraps to produce rich organic fertilizer. The whole farm had much richer soil than the surrounding lands.

The coffee was shade grown under nitrogen fixing trees and above nitrogen fixing ground cover, with the result that it produced as well as coffee plants that get artificial fertilizer twice a year. The citrus orchard also doubled as an area for more composting, and instead of insecticides, the owner just removed the fallen fruit (most of the fallen fruit had pests in it, and removing the fallen fruit interrupted the pest's life cycle), which he then fed to his chickens, for whom pest larvae were a good protein source. Speaking of which, he ground up the eggshells after using the eggs and put the eggshells back in the chicken's feed as a nutritional supplement to keep them in calcium. I get the feeling that there were a lot more little details of closed loops like that that we didn't even hear about.

Using a big ferrocement tank, rainwater, and a simple sand/charcoal filter, CEASO produced drinking water for the whole year during the rainy season. There was a similar setup minus the filters for irrigation water, and that tank doubled as an aquaculture tank for raising fish. All this plus bananas, beans, and other crops on three acres! Sadly, the CEASO produced fruit wine was terrible. I tried a little bit, and having done some home-brewing myself, I could identify lactic acid bacterial contamination. Also the containers weren't sealed, so the yeast had converted most of the alcohol to vinegar using the available oxygen. The bad wine was kind of grounding, as I was beginning to feel like I had dropped into some kind of ecological fantasy world. But no, CEASO is a real place, and like any real place, not everything is perfect.

Sarah Long

Wenqi Yi

Sun Jan 11, 2009

This is a superb trip!

Yesterday, Amelia and I met our second host family, Ruth, her brother Samuel and Samuel's wife Jorsan, Ruth's two boys, 6 and 3, and Samuel and Jorsan's 15 months' old daughter. After a brief introduction and greeting, we were shown to our room. The house had no electricity. A candle stood on the floor in the middle of the room. A glimpse could tell this was the best room of the house and it was normally used by the young couple and their baby girl: a lacquered wooden shelf and a wooden drawer stood against the walls, which were the nicest furniture; a curtain divided the room into two parts and behind the curtain laid a double bed with mosquito net (which are not commonly seen in other families) and a crib. The walls were decorated with cartoon drawings that somewhat lightened the air of this dark room.

This morning I was woken up at 4am by a warm-up conversation among roosters and the barking dogs. I struggled a long time with the decision of whether to go to the bathroom or not, as I remembered Amelia didn't make it there last night because the dogs were provoked somehow and they barked nervously at Amelia. (The bath room was separate from the main house.) I decided to go anyway, and it turned out that I barely make it there only because the dogs were barking at me from behind and my only escape was the bathroom.

On the way back to our room, I saw Amelia brushing her teeth at the gate, standing there all alone and looking ahead into the silver-grey at the horizon. "I feel more comfortable here." She said. It was indeed an interesting spot to brush teeth, as I found out later on, standing at the same spot brushing my teeth. The silver-grey at the horizon turned a little brighter, but the moon and stars could still be seen. A jagged road bended around the house and extended further into the weeds of the uncultivated land. Flumes of smoke rose from the kitchens here and there, diluted and disappeared in the grayish twilight of the morning. I had never felt I could see this far, this clear, I had never felt such a broadness and calmness in my heart and my mind, and I had never known brushing the teeth could be so cool under a sky full of stars at dawn.

I remembered how hard I tried to adjust myself to the fact I would be living without electricity and living on muddy water for four days, how ironic I felt when seeing a high voltage power line right above this household without electricity and how going to the bathroom could be such an adventure; I remembered how guilty and grateful I felt using the best room of the house while the young couple and their baby girl would have to share a room with Ruth and the two little boys, and mean while I remembered the simple happiness and satisfaction I saw on their faces, when we were talking and having dinner together last night. I remembered how scared I was about mosquito bites on one hand, and was afraid to use too much bug spray on the other. And I still remember how proud I felt to be on this trip, especially for today's health fair, where we were going to promote AguaClara plants in the community. Nevertheless, amongst these messy and complex mixtures of feelings, I just can't help feeling that this had been and would be a superb trip!