

journals11

2011 Honduras Trip Journals

View the [pictures](#) from this trip.

Anna Lee's Journal

There is not a word that can properly describe my experience in Honduras. As an engineering student, I considered AguaClara project only as an opportunity for me to be exposed to real engineering projects. However, this trip has allowed me to see that this is not just an engineering project but so much more. AguaClara plants, not only bring clean water to the town's people, but it is a way for the town's people to come together as a community and to work towards one goal, to provide clean water to their families.

In Agalteca, my research team, inlet manifold drained one of the sedimentation tank to change the manifold. We thought this would not take long, but fabricating the new manifold design took a long time and the water level in the distribution tank was decreasing really fast. At this point, it hit me- this is a "real" situation! If we don't hurry up and fill up the sedimentation tank again, the town is not going to have enough water! The town's people worked hard to maintain this plant, and who am I to come all of a sudden and do things that would result in no water. No matter how good my intentions were, I thought this was something that the town's people does not deserve. I was so focused on restoring the sedimentation tank so the town's people would not have to suffer from our bad estimation of time. This sense of urgency and importance were some things that I could definitely not have been able to experience in basement lab in Hollister.

Seeing this social aspects of AguaClara project, has reminded me the fundamental truth about engineering. Engineers work for the betterment of people. They should not work for the sake of high technology or anything else but should find motivation from people's needs and wants. I think, working in front of computers and spending hours in labs, it is so easy to forget why and for whom we are working for. This trip has definitely showed me the greater need of active engineers in the world, who are willing to work outside of their labs and offices, out of their comfort zones, to really understand the needs of underprivileged people by living with them and sharing their culture.

AguaClara was just one of the many class that I took without thinking about it much, but now, for this semester, AguaClara is the most important class I am taking.

Michael Liu's Journal

Traveling through the underprivileged parts of Honduras was an experience that was completely different from what I had anticipated. What took me by surprise was the impact the children in Honduras had on me. Before traveling to Honduras I had no personal connection with the work I was doing. I only read about the impacts that AguaClara created in Honduras but I did not truly feel affected by them. After the home stays with various families throughout Honduras I now have faces and personalities I can place my work with. The faces and personalities that are etched deepest in my mind are the faces of the children that met at these home stays by the name of Jorge Luis and Jenny.

Jorge Luis and Jenny were children who lived in the house I stayed at in Atima. Shy at first, they quickly opened up to me and I eventually found myself spending the majority of my time with them. Now I find that I would be heartbroken to know if one of them were to fall severely ill due to lack of clean drinking water. I realize now that clean water is important because contaminated water targets the most vulnerable people in our societies and the ones that are closest to our hearts.

William Maher's Journal

January 11, 2011

After lunch the group visited a nearby cave. I was ready to go, but a towns person offhandedly warned that our vehicles wouldn't make it. I got out of the van and returned to Luisa's residence. I showered, changed into fresh clothes, and went for a walk. I bought a Coke and walked out to the edge of town. Before long, I was walking on a dirt road passing dogs licking their sores on the side of the street. The houses in this part of town had no fences, no wrought iron. Sometimes no door. I saw shirtless men watching TV as well as women and children going about their daily activities. These less fortunate folks did not have the pot bellies encountered in the area of town near Luisa's residence. This was particularly noticeable with the young women. Truth be told, I am far less startled by the diseases of flesh and bone I see around the edge of town than the diseases of the mind that plague those who gate themselves in the more well-to-do areas.

The school had a soccer pitch and a basketball court. Kids were kicking the ball on both.

I saw a back yard fenced in by razor wire, one of a kind in Atima. Enclosed by the fence were beautiful white ducks in a small pond. They could not stop antagonizing each other with their screeching. Mayor Tito's face smiled at me from a bumper sticker. 2010-2014.

Andrew Sargent's Journal

My initial reason for participating in this trip was to analyze the construction changes the different plants had undergone over time. I joined AguaClara to develop technical engineering skill and hoped this trip would teach me a few things. While I did learn a lot about the construction evolution of the plants, the bulk of what I learned came from the context in which the AguaClara project operates.

Being a foreigner in Honduras, one immediately feels a sense of alienation from the natives. Unlike in NYC subways, it is cultural acceptable to stare at other people for long periods of time. Everywhere we went, from the moment we landed until the day we left, the native people stared at us. Foreigners are intriguing to the people of Honduras because many of them have never seen one before. However, not being used to this cultural norm makes one feel slightly unwanted in the country. That concern was put to rest at the first town meeting we attended in Atima, a small, poor town interested in investing in an AguaClara plant for their community. The town held a meeting to vote on the implementation of this new AguaClara plant. While some are concerned over the involvement of foreigners, the majority of the townspeople look at it as a blessing.

The family I was staying with had no running water, which was an initial shock to me, but the more I learned about Honduras, the quicker I realized that that is a normal occurrence. The people of Atima had a horrific water systems infrastructure and saw AguaClara as the way to improve their lives. The response we received from the people of Atima really spoke to me about the appreciation the people who benefit from AguaClara have for the project. These feelings were reinforced at the town meeting we attended in Alauca. The meeting opened with a discussion amongst the townspeople as to whether they actually needed an AguaClara plant or if the project was being forced on them by another party. Every single townspeople vehemently supported the AguaClara plant being built. I distinctly remember one man thanking God that we had come and worked with them on the plant. The overwhelming support was something that you do not see while working on the project at Cornell. It is easy to forget that AguaClara is not a hypothetical project and that it really changes the lives of thousands of people with every plant built. The strong feelings the beneficiaries showed toward the project really spoke to me and emphasize the core goal of the AguaClara project.

Matt Higgins's Journal

January 10, 2011 - We arrived today in Atima around 5 PM. Traveling here was maybe the bumpiest road I've ever been on. We were immediately distributed into host families. I'm staying with the owner of Pulperia Jenny. His two kids are Jorge Luis (8 years old) and Jenny (5 years old). We had a brief meeting with the mayor and he outlined the town's water problem. Recently a construction project broke part of the distribution line, so many places in the town are not receiving water. My host family doesn't have any running water. Right now the water they use for cooking and drinking is sent through a point-of-use filter given to them by a brigade. It looks like a 5-gallon bucket with a cylindrical canister filtering the water. My host family really didn't know how or if it worked. To me, it looked like some sort of cylinder containing activated carbon but I couldn't tell for sure.

January 11, 2011 - I woke up this morning and took a shower with a bucket of cold, dirty water. I was shivering the whole time because it was a cool morning. We met up with the rest of the team at breakfast. Jorge Luis and Jenny were there and were making fun of me for "sleeping in" until 8 AM and calling me a sleepyhead. They're fun kids. I haven't heard them complain or be upset about anything the entire time we've been here. I think Jorge Luis is especially mature for his age. It's hard for me to think about them growing up without any running water in their house, or think about them getting sick because of dirty water. It makes me feel proud to be part of a group of people who's actually taking concrete steps to help people in these situations. I'm glad the town is in touch with AguaClara - the townspeople owe it to their kids to do something about the drinking water problem.

Robert Solaski's Reflection

AguaClara has served as a major catalyst in my life and given me the guidance needed to realize my full potential as an engineer.

Unprepared and immature I stumbled into the Environmental Engineering major at Cornell. The rigors of engineering were a rude awakening. Then I stumbled upon CEE 2550 and I was formally introduced to AguaClara. On the Outreach team I had a smooth introduction to the program. The nature of the work, which I would truly not understand until much later, was honorable and the class functioned not like a competition, as I had experienced in many of my previous engineering courses, but more like a business where everyone is working towards a common goal. After CEE 2550, I knew that I had to get more involved with the program.

I then took CEE 4540 and the technical applications sparked my interest in a way that no other class had yet done. We were not simply doing problem sets of textbook questions; we were analyzing and understanding the physical equations and processes that governed the construction of water treatment plants that had been built and were fully functional.

Then I was given the opportunity to participate in the yearly trip to Honduras. The trip to Honduras unveiled to me the social context under which the AguaClara program operates. We met local families whose towns were plagued by water borne diseases caused by poor water quality. Compared to most of the towns that we visited our toilet water is of much higher quality than their kitchen sink. I had heard many times before that these people did not have access to clean drinking water but simply hearing it is just not the same as what our group experienced. In contrast when we visited the AguaClara plants that had previously been built in Honduras, the towns were happy to pay for such high quality water at the price we could provide to them with the technology we had helped to develop. The trip to Honduras gave me the big picture perspective that Cornell academics had failed to convey. At Cornell it is easy to get wrapped up in the stress of grades. In AguaClara it is about so much more than that. In AguaClara almost everyone gets exceptional grades, not because it's an easy course but because the social context of the course gives students purpose and motivation to far exceed the effort and passion they would exert for a grade.

AguaClara showed me why I want to be an engineer and the impact that an engineering degree allows me to make. After I became involved with AguaClara my motivation across the board drastically increased, my GPA even jumped a full grade point. AguaClara technology is incredible and the program is ready to spread, although I am scheduled to graduate I plan on working with AguaClara this summer and hope to be a part of the program even after I am no longer at Cornell. It is amazing how far the program has come, how much potential it still has, and how many lives it will touch in the coming years.

Mickey Adelman's Journal

I felt very fortunate to return to Honduras with such a motivated group of students who are in it for all the right reasons. I had been in rural Yoro a few times before with Lafayette College's Engineers Without Borders, and I am glad I have the chance to continue working on sustainable development in Central America with another organization that puts engineering to work for public benefit. Impressive as it is to build functional municipal-scale water treatment plants in the Global South, the AguaClara solutions are even more impressive when seen in real life - and against the backdrop of the difficult problems they are helping to address. I am really thankful to be a part of this group and to work with such exceptional people: Monroe, his students, the AguaClara engineers, the Agua Para el Pueblo staff, and the plant operators and community water boards.

The trip turned into a two-way learning experience which I think is exactly what it is supposed to be. I was really pleased with the performance of the stacked filter demo, and we generated a lot of excitement about adding filtration to the AguaClara treatment train. And just as the operators and APP staff learned from us about how stacked filters worked, we learned from them about the important practical issues we will face in bringing them to full scale. I am definitely excited to keep working with these people in the future as this new technology comes to fruition.

Tanya Cabrito's Journal

My experience in Honduras was simply unforgettable. This was my first trip to Latin America and I was captivated by the pervasive scenic beauty of the area and struck by the warmth of the people in the small towns that AguaClara services. I can't really say the same about the atmosphere in the big cities we visited, but I guess that's to be expected. The metropolitan centers were very interesting though. But for me, the small towns were the jewels of the trip - brimming with a deep sense of community, a plethora of local handmade crafts, and great experiences with local folk. Some of these experiences include helping with tortilla making at Dona Hilda's place, getting to know the host families, learning about coffee bean preparation, trying to make small talk while having the Spanish language skills of 3-year old Honduran (if even that) and everyone's great sense of humor when I accidentally confused swear words for appropriate words in the process, and making friends who I'll cherish for long after the trip.

The trip itself had a diverse time-efficient itinerary that was packed full of fun and interesting things. We explored both rural and metropolitan centers, hiked around Pico Bonito/other, went to a beach and a swimming hole, attended a cultural event (I think it was called the Dance of the Saints), explored a cave; visited a Spanish oven, a sugar plantation, and local markets. It made two weeks seem more like a month and that's awesome. Oh, and the food was great - lots of avocados.

In terms of waterworks, we visited some conventional plants including a slow sand filter and a package plant, La 34, and AguaClara plants in Tamara, Cuatro Comunidades, Agalteca, Marcala, and Ojojona. This variety provided a good opportunity to assess the performance of high-tech water treatment plants and to compare their performance with AguaClara plants. Overall, we found that the conventional plants were generally inefficient, producing quality and service that were subpar to that provided by AguaClara plants. In fact, some of the conventional plants were not fully operational and had broken components that weren't easy to fix. This difference in performance may be attributable to the notion that conventional plants may be implemented without regard for the economic and socio-political context of the area while AguaClara plants are designed with consideration for the serviced community. Just considering the AguaClara plants, we found that the newer plants were performing better than the older plants, which is not too surprising since AguaClara technology is continuously advancing. Finding a way to retrofit the older plants would be cool. If I remember correctly, I believe the best effluent turbidity produced by the AguaClara plants was around 0.6 NTU at Agalteca. After implementation of the demo filter, we achieved effluent turbidities that met US standards of 0.3 NTU, which was super exciting.

At Agalteca, we actually had enough confidence to drink water straight from the tap. It felt kind of revolutionary although as a foreigner I am not really sure if I could fully grasp the sensation. Along that vein, the trip was a great window to gain first-hand experience of the water crisis. It really personalized the conflict and humanized those affected. It's always one thing to see a photograph and read pamphlet, but having the opportunity to be there with the families and actually live, albeit for just two weeks, with an unstable supply of clean water is a poignant wake-up call. And for me, it really made me appreciate having the opportunity to do something about it. It really bolstered my respect for organizations like AguaClara and renewed my motivation for service. Also, it was really wonderful to see that despite all the hardships, the people generally had what I would consider a very vibrant sense of life. This is in contrast to the largely material culture of the US, where it seems like high tech and instant gratification can turn slight inconveniences into tragedies. Overall, it was refreshing experience and a good reminder of the sweetness of community and of the small things that are often overlooked.