

This is Ullo

Volume II

22/23 Winter Travel Team

January 1st - 4th



Issue II Writers

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Visit by team members to St. Joseph's Hospital in Jirapa to learn technical details about its power, water, and sanitation infrastructure.

Samantha Schmitt

January 1, 2023

Hello everyone! If you do not know me my name is Sam and I am a junior in mechanical engineering. I am the travel team co-lead and incoming lead for the Shea Nut Development Project. While in Ullo, I am working on both Shea Nut and Borehole/Water Distribution projects. I am writing to you on the first day of 2023!

I woke up first to some pretty crazy birds chirping outside of our room, second to my alarm, and then my alarm again, then again. We were all pretty tired between the recent travel and New Year's celebrations the night before. I ended up being a little late for breakfast, which was eggs and bread. After breakfast, I rushed back to our room from Brandon and Ina's house to grab some documents for our first real technical briefing of the trip. I walked past Dinner on the way there! Dinner is what we had named the goat Dr. Maier was gifted during the welcoming festivities on the first day in Ullo! The logic was that it would make things a little more painless later on. ;)

When I got back to the house the team was sitting around the kitchen table and we tried to decipher a plan for the next few days in terms of everyone's individual project work. We ended up deciding to split up the day into two different groups: Clinic work and Shea/Water work. Sarah, George, and I were going to head out towards Immaculates house and the school while the others were planning to go to the clinic site. I had to do a little bit of a treasure hunt around the house to find some water testing equipment that was left from the summer. We had a lunch of fried chicken and yams, which has been a typical meal on the trip so far. After a little bit of a crazy clogged toilet situation (I will spare the details), George, Sarah, and I started on our trek out to our first task involving the brand new Zongo Borehole, a borehole that has not yet been integrated into our Google Earth maps of Ullo-Dhantie.

Sarah, George, and I took the long trek down the long, central road we have deemed Lincoln Way as it is the main road like in Ames. We saw both a pig and a unique-looking dog on the road. After a bit of panic and eventually, photos, we were able to continue.

When we got there, we took out our pH tests and Electric Conductivity gauges and began work. This would be a test for when we would assess boreholes further away from the home base. There was a family fetching water from the borehole when we got over there, so we asked them a few questions and used one of their bowls for an informal flow rate test. We also met up with Agape, a 19-year-old student who is very engaged in the projects. I was really excited when I finally met him the night before because I had heard a lot about him from students who had previously traveled.

The four of us: Sarah, George, Agape, and I then made our way over to Immaculates house. Immaculate is another community member with a great reputation. She has been involved in a few different development works with different organizations and is our main contact for shea nut-related questions. Sarah and I were frantically scribbling in our notebooks as Immaculate discussed the status of many of the crops she grows as well as the shea nut drying platform that had been previously built by interns this past summer. We had the opportunity to meet a few of Immaculates daughters. The older two of the three: Rejoice and Franga, really loved to have their picture taken while the group was conversing under a Shea Tree. Immaculate brought out some shea nuts and Dawadawa for us to see. Although I have worked with Ullo shea nuts and shea butter a few times in the US, it was surreal to see them in their place of origin.

Image (right) shows Shea Nuts and Dawadawa products at Immaculates house.



Justin, one of our community representatives, happened to stop by while we were at Immaculates. Sarah and I took the opportunity to learn some Digari from Agape and him.

We said 'Ismani' (good evening) to some of the women as we were leaving Immaculates home. I took it we that had not said it right given the laughter of everyone in the vicinity. As we walked to the school boreholes for testing, Agape taught us various other Digari phrases: 'Abeso' (good/you too), 'Fo wa kpenya?' (how are you?), 'Wa youri la bon?' (what is your name?), excuse my spelling. I wrote as many words and phrases as I could down in my notebook. Hopefully, I will have a full book of Digari by the time we leave Ullo. Sarah and I then proceeded to spend the entire rest of the night quizzing and attempting to converse with one another.

We dropped by the Ullo Senior High School Poly tanks to take some data for the kitchen, boys' dorm, and girls' dorm taps. It was starting to get dark which made it a challenge in terms of pH testing. On the way back I stopped by Zach's brother's shop to get a drink. I got banana milk, as that was one of the few had not tried yet. We made our way back to Brandon and Inas to find a bunch of tables set outside by the porch. Paul and Justin joined us for dinner, which was composed of all traditional Ghanaian food. We had fufu, banku, groundnut soup, chicken, and jollof rice. We also ate Dinner! (the goat). My favorite part was the fufu with groundnut soup!

After dinner, everyone was pretty tired but satisfied with the completed work. The team who went out to the clinic site was able to do some necessary planning for some heavy work and construction days ahead. Sarah, George, and I were able to get a whole new host of ideas to take back with us after our conversations with Immaculate, and had a plan in terms of area-wide borehole dry-season borehole assessments.

The day, however, was not over. We heard of a dance that was to occur at the Chief's palace as both homecoming and New Years' celebrations. The one thing I can say about the team is we are not willing to turn down a dance! The entire team headed out with Agape and some of our other new friends. When we got to the palace, we were immediately greeted by some of the people who we met at the initial welcome a few days ago. The same few girls who danced with me previously spotted me right away and came over. Unfortunately, the music has been too loud for me to catch their names yet. Although it makes conversations difficult, the blaring stereo is perfect for dance-offs. I was exchanging dance moves (Macarena, amongst other horribly executed moves) when I noticed a huddle of people. Was surprised, but also not surprised to see John Cena (Isaac) tearing it up in a dance-off! When the crowd subsided, a few of us decided to head back because it was pretty late. On the way home, we stopped by the John Cenas dance partners bar just to say hi to his family and friends. We also went by a shop for John Cena to grab some Malta (chocolate soda) for the house. The few of us that decided to head out early: Keziah, Isaac, and went right to bed when we got back, but not without exchanging stories from the day.

Image (right) Isaac, Becca, and Josh are in a dance battle.

So far, I have been equally overwhelmed and amazed by all of the new people, sites, culture, and food. I can never really know what to expect. Each day has been so unique and special in its own way, brought on by a community that is so incredibly genuine and motivated. I am excited to tell you about the rest of the trip. For now, goodbye!



Isaac Bradford

January 2nd, 2023

Hello everyone! I hope you are all doing well. This is the old Rainwater Catchment Lead coming at you not-really-live from Ghana (6 am this morning was when my term ended). We have been having a blast here in Ullilo getting to spend time with the community and learning about what the community thinks of the project and ISU EWB. Today Becca (our new Rainwater Catchment (RWC) Leader) and I got up early to begin working on some documents and estimates for RWC. The sunrise was beautiful and was good to see after days of dancing and waking up late. A good start to the work week. We still could not beat Sarah, she was already awake. At breakfast, we met the man, the myth, the legend, Zack. Now, Zack and I have been communicating for a long while now, working on getting parts and information to get tools and items for the summer trip. So when I saw him, it was like seeing an old friend, jokes were made and it was another great start to the morning.

After breakfast and some more streamlining of our rainwater catchment calculator, we were ready to head out. But first, before you leave the house with us I have to tell you how we got here. Flashback to September 2022, the RWC team is brainstorming what needs to be accomplished for the semester. I bring up that Dr. Maier had spoken with our in-country partner Self Help International and how they want an educational irrigated garden. Our agriculture-focused members mention how we have a plant water document and that we should be able to revisit it to create a document to determine how much water a garden should require. Together we decide that we can make a solver that can determine the cost of water storage based on what crops the client prefers. Now, we can plug in the dimensions and determine how much water the Self-Help System will need with just a few clicks of a button. I just wanted to emphasize that we have spent the last few months making this template as helpful as possible and with the help of the whole team and Dr. Maier's direction we finished our template. Turns out there are 28 ounces in an inch of water (if I am wrong please inform me, it would be helpful).

While we were working the clinic team was gaining street cred by carrying a lot of bricks for the clinic foundation. They came back strong and a bit tired. We are proud of our clinic team! Later that day they carried mortar, and Keziah and Josh got to build some walls (the strongest hopefully). Now back to us leaving the house, Sarah, Becca, and I leave out to the windy, dry day to begin working on the RWC project. This winter we planned to add an additional 20000L of water storage to allow for more access to water for the garden. We all worked to take almost every measurement of the West side of the Mess Hall. This way we won't have to measure in photoshopped pictures of Pauls anymore. In the midst of this, we found out Becca's toes were immensely strong, made of steel you could say. This entertained Paul's son Kerry later that day.



Image (right) shows Becca and Isaac making a downspout for the gutters on the Rainwater Catchment System.

We got to talk to John Jovial, Paul, Zack, and Justin, some of the biggest proponents at the school for this project. We asked questions, laughed and joked around, and had a great time getting to work on a project Becca and I have spent three years pouring heart, soul, and time into. It was pretty emotional and very enjoyable. Being here working with Paul, Justin, Zack, Agape, and Kerry, reminds me of spending time in the farmlands of Iowa. I usually bale hay every summer for my Haycation and now I have my RWCation. Whenever you get to work a job with good people, it makes the job go faster and the days longer, so that you can soak up all the joy of life. I am making sure I am getting my daily dose of laughs. I appreciate this opportunity and the impact we get to make with the people that help us.

Becca Cheney

January 3rd, 2023

Hello everyone! Today was another very busy day. I got to work on the rainwater catchment system at Ullo senior high. Zach, Paul, Justin, and Agape (our community contacts in Ullo) were all there in the morning showing me, Sam, and Isaac what to do. It was so amazing to finally be able to see the project that I have been working on since my freshman year. I worked with Zach to build a gutter out of a sheet of metal. I managed to complete it with only a couple of minor cuts (oopsies). Then Isaac and I constructed the downspout to go into the gutter.

I wore my steel-toe boots for this trip which some of the kids found very interesting. I was sitting down taking a drink of water and Agape and Kerry (Paul's son who had been working with us) walked up to me and Kerry whacked my boot with a hammer. Agape's face was a humorous mix of horror and confusion because he had no idea that my boots had steel protecting my toes. After I explained it to him he found it equally as funny.

We all went back to the house for lunch and to refill our water. We had noodles with vegetables in them. After our little break, we started walking back to the high school but only made it about 20 feet before we saw Paul, Justin, Agape, and Kerry riding toward us on bikes. Turns out Ina called them to help fix a broken water pipe at the house we are staying at. So we all went with them to check it out. I went to move the concrete cover out of the way and there was a gigantic spider. Kerry brushed it out of the way with his hands and accidentally threw the spider at me. So I immediately started shaking the spider off and ran around to the other side of the structure (The spider was larger than a half-dollar coin for reference)

After that, we walked back to the high school to continue working on the rainwater catchment system. This time, Sam, Isaac, Josh, and I worked to construct the rain gutter while Paul and Justin attached the other gutter to the roof. It was a lot more difficult without Zach helping this time, but we still managed. I wanted to help attach the gutters but they told me I was too short (I am 5 foot 2 inches) so I helped with other things instead. A short while later Justin asked Paul to borrow the multi-tool, but Paul had left it on top of the 10,000 L tanks. Isaac quickly thought to lift me on his shoulders to reach the top of the tank. The tool was so far back that I had to climb across the top of the tank to reach it. But everyone else was impressed but how quickly we managed to get it without a ladder.

For dinner, we had banku with groundnut soup, rice, and chicken. It was very tasty.

Image (right) Isaac lifting Becca to reach the top of the tanks.



After dinner, we went to professor Bruce's house. He is a Professor of hydrogeology at the University of Ghana, and the Chief of Tupare (a community neighboring Ullo). It was very interesting to listen to all of his advice and experiences. The stars at his property were beautiful.

Josh Ledesma

January 4, 2023

So far in Ullo it has been an amazing experience! With all the amazing people I have met to the new foods, it has been a trip to remember. We all have been working hard on our projects, with myself keeping busy at the clinic site. Being able to see the health clinic being built and seeing all of our design work being physically constructed is beyond words. I even got the chance to carry blocks and lay mortar for a wall being built, and even got a thumbs up from the contractor! Today was a big day for the clinic team with the chance to meet with the plumber and electrician to go over future plans. Getting the chance to do work outside of the classroom and talk with professionals in the field is something that I would never have done in coursework alone. We got lots of good ideas and even are considering implementing a bio-digester in place of the three-tank septic system. Overall today was a very productive and fun day. We ended the day with some charades and I finally got to sleep a full night since our arrival here in Ghana.

