Engineers Without Borders at Iowa State University

January 5th - January 8th

Volume III

Winter Travel Team

2022-2023



Picture taken of EWB students and faculty from ISU and KNUST with Ullo hosts, the Brandon & Ina Retcher family and Ullo key collaborators Zack, Paul, Justin, and Chief Hassan.

Issue III Writers

- Keziah Schwendemann
- Tiaunna Little
- Sarah Ng

Issue III Updates

- KNUST in Ullo
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- Ullo Community Market
- Processing Shea-Nuts



Fun time with KNUST at the Karni irrigation site.

Keziah Schwendemann January 5th, 2023

Every day is a new adventure and today was no different. Our partners at the KNUST EWB chapter spent more than 10 hours driving from Accra to the upper region and then several hours to Ullo where all the projects are being implemented. What a fun time! They streamed into Ina and Brandon's house and we all got to greet each other, share names, and project forces. Several of them were coming to Ullo for the first time just like us, others we had met ISU, and a few were new friends. When everyone was settled we headed out to the clinic site to get the KNUST clinic group up to speed on some of the conversations we have been having over the course of these days. Communication is so key, and getting to talk to Professor Nemo and Bambi was a learning and growing experience as we walked the clinic site. Around this time a party from Self Help international joined us to hear about the clinic and check up on their other projects in the area. I had gotten to meet two of them on a previous day in Jirapa, but today, Benjamin, the country director came a long way by bus to meet us here. Not an hour later Ghana health also graced us with a representative who toured the clinic and gave her observations and comments. This many groups all getting to see the progress of the clinic was so exciting and really got me to start dreaming of how this clinic will impact the whole region. Later both the paramount chief and chief professor Bruce. After checking out the clinic we stopped by the unfinished restroom and stopped for lunch at that point. The cooks and assistants at the house made us a lovely meal with so much Ghanaian rice—two coolers of it!

The afternoon was also enjoyable because we tagged along on some dam trips. The first dam was the Dante dam, and there are crocodiles in the retention lake. But suddenly emerging from the surface of the water was a ridged back and an eye. The croc was out there...staring at us while Isaac tried to measure the depth of the water with a line and a rock. Next up was the Kareny dam. This dam is the only working one in the region. It was incredible! Everywhere else is so dry that dust billows but here they can grow onions, plantains, and pumpkins fed by channels that go for miles. There was even a community garden plot for the blind and physically challenged. Some day the hope is to have this microenvironment here in Ullo, Dante.

The image to the right shows some of the team and community members walking the channels at the Karny dam

Then we wrapped up a great time hanging out with our friends from KNUST.



Keziah Schwendemann January 6th, 2023

Six days into the new year, and what a day it was! Right after breakfast we had a big meeting with all the KNUST and ISU personnel and listed what we all set out today. The morning was a combination of finishing the water tap running from the mechanized borehole put in by professor chief Bruce to the agricultural building at the senior high school. They are even utilizing the poly tank stand behind the school building. I didn't have a lot going on this morning with the clinic so I joined for some time, playing rubrics cube with Ferdinand. Then the time between 10 and 11 I headed over to the clinic site to help with any construction that was being conducted today. But even before I finished greeting my friends John and Clifford, workmen on the crew, the whole group came and got me for the market. However, we ended up moving concrete blocks.

Finally around 12 the market really started to pick up. With people and vendors buying and selling throughout the area. Many of us first set out to buy cloth for a piece of handmade clothing. I got a turquoise and blue cloth which will be turned into a skirt. The seamstress we were interested in was incredible. She had around 4 apprentices, two of whom were almost graduated. After a quick measurement and lunch, some of us had to stop for a nap. Between work this morning and the sun, it was hard to stay focused. Later there was an opportunity to see the wares at the market, and Isaac and Josh even bought karnnis, a short hoe. Seeing an interesting window to explore, I went back to the seamstress's place and chatted with Mary Rose for a few minutes.

The image to the right shows the farm implements Josh and Isaac bought at the market.

Then seeing Bambi and George walking by I decided to join them on a walk to the EWB borehole to collect data. Meanwhile, hearing from others they had a lively match of soccer, shot a physics video for Ferdinand's YouTube channel, and rested.



Since this was the last day for KNUST here in Ullo, so to caped off the day we all enjoyed chatting and playing games. Mafia was especially fun because they let me be the narrator. We are sad to see the team go but thankfully we will get the chance to see some of them again next week in Kumasi. It was so fun working with them on sanitation, water distribution, tap from the borehole, and the kitchen stoves at the high school.

Tiaunna Little January 7th, 2023

Hello everyone! This morning was bittersweet because it was the KNUST student's last day of their trip. We all enjoyed having them around and getting to collaborate on our projects. We had fun getting to know them all on a personal level as well. Luckily we will get to see most of them again when we travel to Kumasi soon!

After they left we had a debriefing meeting to figure out our plans for the next few days. A group of us headed to the clinic site to take measurements of potential locations for the water tower, septic tank, generator, and placenta pit. Throughout our time in Ullo, we learned a lot about how all of these systems work and we got to see many examples of them in use. After taking measurements, we planned to move our EWB sign to the new entrance of the clinic because it is currently at the old entrance. However, we ran into some trouble with the way the concrete was originally poured into the sign which made it too difficult for us to dig by hand. We had to get welders to cut off the metal sign and take it back with them to extend out the posts. We will have to wait for another day to finally move the sign.

For lunch, we had local chicken, beans, and fried plantains. This was my first time trying fried plantains and they were amazing! Many of us took a much-needed nap and then got to work shortly after. The afternoon consisted of learning some of the Shea-making processes. So we headed to Immaculates house to learn her Shea-making ways. We first started by washing off all the Shea nuts with warm water. Next was grinding the Shea nuts which is a process where they take the Shea nuts to a place with a grinding machine. However, the person who typically does this in Ullo was not available so we had to take about a 30-minute drive to a nearby community called Hang.

When we returned we had to head back as dinner time was approaching. More of the Shea process will continue tomorrow. It was so cool to get to see part of the process because I had only ever seen the final result of the Shea butter. This has definitely made me have a greater appreciation for all

the women who make Shea butter.

The image to the right shows Tiaunna, Sarah, Sam, Becca, Keziah, and Issac helping Immaculate wash Shea nuts.

For dinner, we had our usual chicken, beans, and rice plus we got to try a special treat from lna's bakery. She made us some of her special cheese pizza and the dough was so sweet which made the pizza taste very delicious! After dinner, we decompressed as a team and concluded our night. My time in Ullo has been an amazing experience and I am glad I got the opportunity to travel here after being a part of EWB for almost 4 years. It has been very rewarding to see all our projects in person and see the positive impact they have on the community.



Sarah Ng January 8th, 2023

It's Sunday, so the team took a break to take a trip to Jirapa. After a quick car ride, we arrived at our destination: Mushroom Rock! Mushroom Rock is - you guessed it - a naturally formed rock in the shape of a giant mushroom. After some fun pictures, we explored the area and did some bouldering. Bouldering wasn't something I expected to do on this trip, so it was a nice surprise. Then we had the opportunity to visit the market. I've discovered that my favorite day is market day, which, if you play your cards right, could be practically every day. The market is on a different day in each community in the area, so we could visit the market in Ullo on Friday and the market in Jirapa today. We even ran into a friendly face! One of the stalls selling markets was run by the same woman from whom we had gotten items in Ullo just two days before.

The image to the right shows ISU EWB laid out with rocks at the Mushroom Rock site.

After returning to Ullo, some of us headed to Immaculates to begin converting shea nuts to butter. I was originally on the shea nut team my freshman year, so seeing and practicing what I had previously only heard about second-hand was amazing! We washed and dried the shea nuts before driving to Hain to grind the nuts. While we were waiting for the machine, we saw some women working on the next steps in the process. Two women were mixing a bowl where the separation of shea butter could be seen, and others were brushing ground shea nut pieces off of the ground where they had been



laying to dry in the sun. Immaculate then told us to meet her tomorrow morning to continue the process. While the entire experience was great, the best part was the smell! Shea nuts smell amazing, and the smell is a lot stronger when the nuts are freshly ground versus already packaged in various lotions or shampoos.

I spent the rest of the night attending various meetings, and I can't wait to see what tomorrow brings!