



Engineers Without Borders

Iowa State University

Fall 2021 Newsletter

History

In 2013, the Iowa State Chapter of Engineers Without Borders was paired with Ullo, a community in Northern Ghana. Since then, EWB-ISU has sent travel teams to Ullo for a couple of weeks during the Summer and Winter Break to assess the community's needs, monitor current projects, and implement new projects. Ultimately, we concluded that a water distribution system for the boarding high school in Ullo was the best option. A team in the Winter of 2017-'18 determined the best source of water, and the Winter 2018-'19 team completed the implementation of the system. In addition to monitoring the system, new projects have started in Ullo, including cookstoves, a clinic, shea-nut, and an agriculture and irrigation project.

Mission

Engineers Without Borders at Iowa State builds a better world through engineering projects that empower communities to meet their basic human needs and equip leaders to solve the world's most pressing challenges.



Our Current Projects

Clinic

The Clinic Project is one of our newest and most significant projects. Our goal is to build a new clinic and improve healthcare for the people of Ullo and surrounding communities as well. Currently, the clinic in Ullo consists of five rooms across two buildings. The first phase of the clinic project consists of eleven rooms, with later phases adding around twenty more. This clinic is expected to serve 10,000-20,000 people. The Ghanaian government, the Ullo community, and the district have all expressed support for this project, and the government has committed to staff and furnish the new clinic.

Water Monitoring 2.0

In 2018 we implemented a water distribution system at the Ullo Senior High School. The system provides water to over one thousand students at the school. Already it has shown a positive effect on the students and the community. The water distribution provides them with safe drinking water and reduces the time spent traveling to collect water each day. As we are in the monitoring phase for the water distribution project, we are looking for ways to improve upon the system to function to the highest of its abilities and continue to meet the community's needs.

Kitchen and Household Stoves

Ullo's existing stoves are inefficient in firewood consumption and produce much smoke. We are working on designing more efficient household and kitchen stoves to better the quality of life for cooks and lessen the environmental impact. Designs for the stove have been made, and we hope to implement and test the designs in our next travel trip.

Rainwater Catchment and Irrigation

We are designing and installing a rainwater catchment and drip irrigation system for the school garden in Ullo senior high school. The rainwater catchment system will collect water during the rainy season to later be used for agricultural purposes. This project will provide a means of crop production during the dry season and act as an educational tool for the Ullo Senior High School agriculture department. We plan to implement the rainwater catchment system during our next travel trip.

Ullo-Shea

The Ullo-Shea project is another one of our newer projects. The collection and selling of shea nuts are a significant source of income for the women of Ullo. Due to inefficient drying and storing methods, the shea nuts are not reaching their selling potential. We are working with the women of Ullo to develop methods to help extend the production period for shea nuts to help these women improve their business.

Back to the Old...

Regular in-person general meetings returned this semester after the hybrid project meetings of the last three semesters. Meetings have been taking place in Elings 0308 each Wednesday evening, with brief general announcements before each group begins working on their project. Having so many members in the same room again has helped communication between teams- now, a member of the clinic team interested in merchandise can simply walk across the room rather than having to draft an email.

A return to in-person meetings has also brought new life to an old tradition- meetings are now accompanied by a Spotify playlist put together by members of the club. With new songs being added every week, the time before meetings are becoming more lively than ever.



Gathering for Ghana

Our annual fundraising event, Gathering for Ghana, returned in person on October 30th. This kicked off our FundISU campaign for phase 2 of the clinic project. We gathered more than our original goal of \$5,000 within the first three weeks, and we ended up raising over \$11,000! A big thank you to everyone who donated this year! EWBISU and the Ullo community greatly appreciate your contribution to the project.

Deal's Orchard Fundraiser

The EWB tradition continues... This Fall, members fundraised by helping out at Deal's Orchard in Jefferson, IA, for not one weekend but three! Members facilitated activities like the apple slingshot, sand art, and painting. Others ran the cider stand, helped bag groceries, and clean pumpkins. We greatly appreciate the Deal Family's donations to our organization and support for our projects, and we look forward to going back again next year!



Dr. Akowuah Visits



We had the immense pleasure of welcoming Dr. Akowuah of KNUST to Iowa State this Fall. Dr. Akowuah is a pioneering advisor and the Senior Lecturer for the EWB chapter at KNUST. We have been working closely to implement our projects in Ghana over the past year. He spent five weeks here, giving his advice and adding a new perspective to our work. He was an invaluable resource, and we are thankful for the opportunity to have him here on campus. We are looking forward to seeing Dr. Akowuah again soon on our upcoming travel trip to Ghana.

Winter Travel Trip!

This winter, we will be sending 7 EWB members to Ghana to further our projects with the Ullo community. Some of the tasks this team will be accomplishing while in Ghana include testing/monitoring the water distribution system, determining readily available materials for kitchen stoves, investigating better storage procedures to decrease post-harvest loss for the shea nut project, constructing the 2nd phase of the Rainwater Catchment project, pre-implementation activities for Phase 1 of the Clinic, as well as gathering feedback from the community for our multiple projects.



This trip will culminate in assessing old projects and implementing new projects. That is a lot to cover in just a few weeks, so to maximize the impact of EWB's trip to Ullo this winter, each travel team member is in charge of specific aspects of this trip. The team includes Libby Mullican (Clinic Water Representative and Trip Photographer), Matthew Dunning (Clinic Sanitation Representative), Matt Butler (RWC Representative), Rebecca Crawford (PMEL Lead, SHI Liaison), Joe Kim (Team Leader, Project Manager), Jennifer Culver (Shea Nut Representative, Health and Safety Officer), and Mary Okkema (Treasurer).



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