



Engineers Without Borders

Iowa State University

Fall 2020 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 largest 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 to have a positive effect on the students and the community. The water distribution provides them with safe drinking water and reduces the time spent each day traveling to collect water. As we are in the monitoring phase for the water distribution project, we are looking for ways we can improve upon the system so that it is functioning to the highest of its abilities and will continue to meet the community's needs.

Kitchen and Household Stoves

Ullo's existing stoves are inefficient in firewood consumption and produce a lot of smoke. We are working to design 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 in our next travel trip to implement and test the designs.

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 both 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 large source of income for the women of Ullo. Currently, 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.

Domestic Project

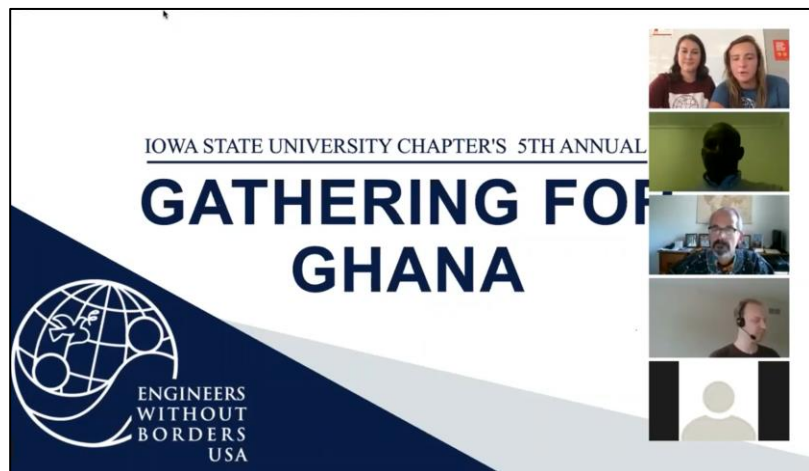
A small team of EWB members has been working with the Ames community to find a local project for the club to get involved with. The domestic project is currently focused on building charging stations for the Food at First food pantry in Ames. These stations will allow Ames community members who may have difficulty accessing reliable power outlets to charge their electronic devices. Designs have been made and the charging stations will be built once we are back on campus!

Adjustments at ISU

We returned to campus this Fall, and we wanted to make sure that we had options for everyone to be comfortable meeting again and follow guidelines put in place by Iowa State. We created a Microsoft Teams page for the club with every project group having their own personal channel to work and communicate on. We also adjusted our normal meeting schedule to account for social distancing. Each team had their own classroom to meet in weekly as well as virtually through Microsoft Teams. Then we met once a month as a whole club in a big lecture hall on campus or, again, members had the option of tuning in virtually to hear general club announcements. Mask were required at all club events of course! Our membership team rose to the challenge of virtual recruitment, and we ushered in 40 new members to the club this semester.



Domestic Team in-person meeting this semester. Mask up!



Gathering for Ghana

After our original event was postponed in the Spring, we had our first virtual Gathering for Ghana in at the beginning of October to help raise funds for the construction of a much-needed clinic in Ullo. We created a FundISU page which would be open for a month, and originally, we had a goal of raising \$5000 with a generous donor matching every dollar. We raised half of that the day of Gathering for Ghana. We met our goal about two weeks into the campaign, so we decided to raise our goal to \$7500! With the donor matching we raised a total of \$13,160, which is over half of the cost to build the clinic. Thank you to all who donated to assist us in completing our mission as an organization. We and the Ullo community greatly appreciate your contribution to the project.



Zack and Paul Saeed of Ullo community (in ISU shirts), Liz Ategu of US Embassy public affairs (center), and representatives of KNUST at the UPI Launch at KNUST.

KNUST team inspecting the water reservoir at the girls' dormitory during one of their trips to Ullo.



KNUST Partnership

In October we also officially launched the U.S. State Department Bureau of African Affairs' University Partnerships Initiative (UPI) with Kwame Nkrumah University of Science and Technology (KNUST) College of Engineering and the U.S. Embassy in Ghana. Our program will include student teams from ISU joining student teams from KNUST to work in the Ullo Traditional Area; the opportunity for ISU faculty and students to spend a semester at KNUST; and the ability for KNUST faculty and students to spend a semester at ISU. The KNUST team has made two trips to Ullo this semester to assess the breakdown of our water chlorination system and complete testing on the water. Unfortunately, we are unable to travel to Ullo again this Winter. The engineering teams are preparing remote implementation documents to help the KNUST team to complete necessary work in Ullo. We hope to have half of the rainwater catchment system implemented at the high school this winter.

What's Happening in Ames?

We successfully held multiple socially distanced and virtual social events as well as service opportunities and fundraising events. Just before most of us were getting on to campus for the semester, a terrible derecho blew through Iowa devastating crop fields and leaving many without power for days. Our club organized a clean-up event before classes even started to help community members around Ames with brush pick up. We had a group of volunteers work at a Deal's Orchard for a weekend, helping run activities for their fall festival, working concessions, and picking apples. We are looking to increase our impact in our local community in the coming year. We were also able to hold an outdoor social event at the beginning of the semester at Ledges State Park, and virtually with a Murder Mystery Party over Webex.



Top: Members at the Ledges State Park social event.
Bottom: General Meeting in the basement of Carver Hall.



Top: Members at the community clean-up after the derecho.

Bottom: Volunteers at Deal's Orchard

For professional and leadership development, we were able to have past EWB members talk to our members through Webex, and they provided insight into how EWB impacted their career and any advice they had for current members. We hope to hold more of these events to increase our sense of community within the club and provide opportunities for our members to develop as leaders as is in our organization's mission statement.

We are now starting to look towards what we will do as a club in 2021, as we have elected our new executive board for the year. We see so much potential in the coming year, and we are looking forward to seeing where they take us and this organization.



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**Peter & Denise Strub,
ISU'81**

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