

SPRING 2019

HDC/EWB SPRING NEWSLETTER

UPDATES ON RECENT EVENTS AND TRAVEL IN CWRU'S
HUMANITARIAN DESIGN CORPS & ENGINEERS WITHOUT
BORDERS



**SNEAK PEEK OF WHAT'S
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Dominican Republic Monitoring & Evaluation Trip

CWRU-EMB has a long-standing relationship with people of Cruce de Blanco. While this project began in 2007 and a water distribution system was successfully installed by 2011, it has been several years since CWRU-EMB has been back to visit the community and evaluate the state of the system. So this latest Dominican Republic trip in January focused on rebuilding connections with the Cruce de Blanco community and evaluating what steps need to be taken next in order to provide the community with a sustainable source of clean drinking water.

The six of us who traveled found ways to use our high school Spanish to make meaningful connections with the community. Through several meetings with the water committee, we developed a plan on what to do next. We are currently working on implementing several of these, including a redesigned sedimentation filter and chlorinated tank next to the local school.

We talked to some teachers in the school, who are interested in working with us on later projects. We look forward to partnering more closely with the teachers and students and are excited to continue our work with the Cruce community.

Malawi Assessment Trip

In January 2019, our Malawi team conducted an assessment trip to Kasungu National Park, our project site in Malawi. We traveled with the main purpose of assessing the site for the for a solar energy installation to bring lighting and power to the visitor facility.

The first two days of the week long assessment trip were spent in Lilongwe. During this time we met with the Director of the National Park Reservation to gain more insight on the history of the park, and the value of project there. The team also visited local solar supply vendors, since we plan on obtaining supplies locally to both stimulate the local economy and assure the compatibility of components with the local electric grid system. The next three days were spent collecting information needed to establish system requirements. Measurements were taken of notable buildings and the overall site. These measurements have proven critical to our designing stage. Interviews were also conducted with park officials to establish a hierarchy of needs for the solar powered system.

The team then traveled to Mulonje where school supplies were distributed to children in an orphanage.

Syaheen, one of the students on the trip, said “The most memorable part of the trip is when we were able to immerse ourselves in the community by spending time with the locals.”



Costa Rica Implementation Trip

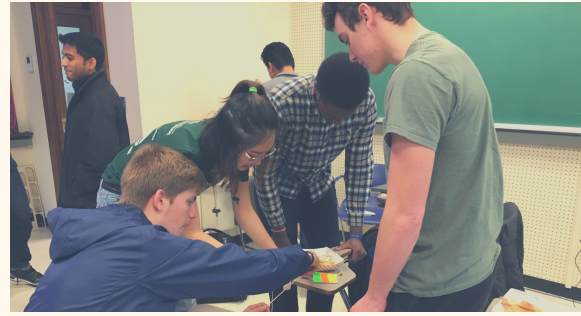
During this past spring break, six students along with three advisors returned to the small community of Las Pilas near the Pacific Coast of Costa Rica. This community has experienced frequent water shortages, which our team has been working to improve over the past several years. Last year, we installed two kilometers of pipeline in the distribution system. This year, the goal was to monitor and fix any issues that have occurred since that installation, including looking at erosion control and installing a meter to detect leaks in the pipeline.

Initially, we installed a meter at the exit of the tank so that the water committee could track how much water was leaving the tank and find leaks. However, the next day, we realized there was too much head loss for the water to reach all of the houses, so we took the meter out.

Although we needed to adjust plans, we did learn a lot about the water distribution system and about problem areas of the pipe. In particular, we want to design a map of the system for the club's and the committee's reference. In an effort to explore erosion control, we visited the organization Restoring Our Water Shed, which aims to mitigate erosion using community-based environmental planning and sustainable land use techniques. The severe periods of drought that this area receives is due to global warming, years of intense farming, and the clearcutting of the forests that helped keep water in the ground. For these reasons, we are looking into the use of plants-not only would it solve the erosion problem, it would be a sustainable solution to the community's main concern: ensuring that all its members can have a reliable source of clean water.

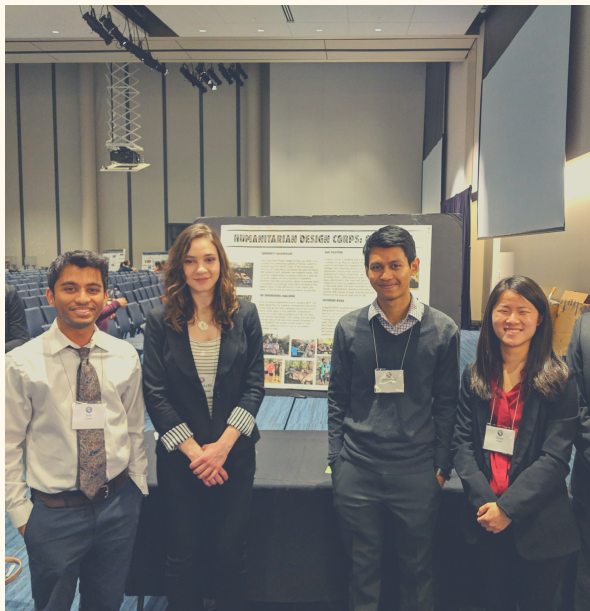
HDC at E Week

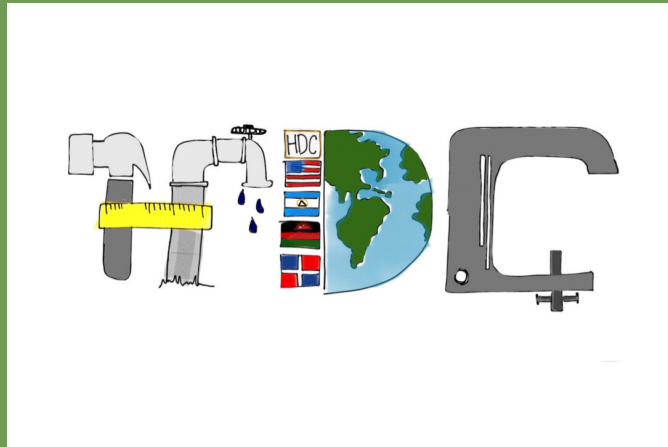
Engineers Week is a program that takes place nationally during which engineering is highlighted at different universities. Case Western's engineers week consists of multiple events, such as a light bulb drop, an engineering carnival, and design competitions. The week culminates in the Engineers Week Reception, which is a networking event that features a keynote speaker and student poster presentations. HDC participated in the engineering carnival and the reception. Our booth at the carnival was stocked with cardboard, foam, string, paper, popsicle sticks, and other materials that we encouraged children at the carnival to build "splints" out of. Our volunteers helped the children construct splints that would stabilize a broken bone and encouraged them to think about what requirements such a splint would have. At the E Week Reception, all three international teams created posters and a small demonstration.



Workshops and GB

The first general body meeting of the semester was on February 17th. During this meeting, the new executive board introduced themselves and shared the club's goals for the semester. We broke into groups to brainstorm how to make general body meetings more engaging and what members wanted out of the club. At the end, we did a fun activity where we built bridges out of various supplies, such as marshmallows, toothpicks, and string. The bridge that was able to hold the most coins won. The first workshop of the semester also occurred in late February. At the workshop, Myles Murray, a Case alum with Better Together Solar, shared information about solar panels and taught attendees what needs to be considered before designing a solar panel system. Myles is the Malawi team's technical adviser. A second part of this workshop occurred in March in which the solar team started designing a system of solar panels for the national park in Malawi. HDC also put on a fundraising workshop in March to teach members the best ways to find sponsors for trips. HDC enables students to travel at a subsidized cost. This only happens through the generous donations of time, funds, and materials from our sponsors.





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If you are interested in donating time,
materials, or funds, [click here](#)

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