



ENGINEERS WITHOUT BORDERS USA MASSACHUSETTS INSTITUTE OF TECHNOLOGY CHAPTER

Official Newsletter

Editor's Note

BY SUSAN HONG

Welcome to the Winter 2024 issue of the MIT Engineers Without Borders newsletter! We're excited to update you on the progress of our different project teams: Health & Sanitation and Farm & Irrigation, as well as show you what our members have been up to this year! We've been holding General Body Meetings, working within our subcommittees, and even teaching high schoolers through MIT's Splash program.

We would like to thank everyone who has supported our chapter: our wonderful mentors and partners from the EWB Boston Professional Chapter, Sydney Kates, our faculty advisors, Libby Hsu and Tal Cohen, and MIT D-Lab for their support and guidance, and last but not least - our donors and members who make all we do possible. Enjoy the newsletter!

Message from President

BY ISELLE BARRIOS

I joined EWB-MIT during my freshman fall. At that time, our chapter was still recovering from the effects of the COVID-19 pandemic, unsure when we would be able to travel again. Our projects have progressed significantly since then, and I have really enjoyed being able to work with the other members of EWB to strengthen our chapter.

Our Health and Sanitation team has finished designing the dispensary renovations and is preparing a bidding package for contractors in Tanzania. The team is aiming to travel and complete project implementation during summer 2024. The Farm and Irrigation team has submitted their alternatives analysis and decided to pump water from the nearby river to irrigate the school garden. They are currently designing a pumping and irrigation system.

Since their establishment last year, our committees have continued their work supporting our chapter operations. The presidential committee has documented how we run our chapter. The education committee taught a class for SPLASH (an event where high schoolers take classes taught by MIT students) and hosted lectures on international development topics open to the MIT community. The publicity committee has helped spread the word about our events. Fundraising committee has raised over \$4,000 through grants, support from MIT departments, and a restaurant fundraiser. Looking forward to next semester, we hope to be able to raise an additional \$6,000 to support our Health and Sanitation team's implementation this summer.

Once again, we had a highly successful fall recruitment, gaining over a dozen new members for our two project teams. Our exec team also gained several new members - welcome to Keonna, Celestina, Kareena, Susan, Olúwatómi, Jayashabari and Karie! We're excited to have so many new and familiar faces on our exec team and project teams this year!

I want to say thank you to all of our amazing mentors at the Boston Professionals Chapter and MIT D-Lab, who have provided invaluable guidance on our projects. I want to thank all the organizations and individuals who provide financial support to our chapter, without which we would not be able to implement our projects. Finally, I sincerely thank every one of our members, who put in the work every day to help run our chapter and do the difficult, detailed work on our projects. Your dedication and energy are so inspiring, and none of our work would happen without you!

Donors' Corner

Thank you to all of our donors! Your donations will help fund expenses such as merchandise and food for our General Body Meetings, as well as the implementation of our projects this summer. If you would like to make another donation, or donate for the first time, you can visit our page at giving.mit.edu [here](#).





Health and Sanitation Project Updates

BY MARIA HERNANDEZ

The Health and Sanitation team is continuing to work on a structural project for a local medical dispensary in Mkutani, Tanzania. The project aims to address the gap in maternal care and improve overall patient care for the ~4,800 people the Mkutani dispensary serves. We are currently in the latter phase of design, where our team members have been working diligently along with structural engineering mentors from the Boston Professionals Chapter to renovate the roof and add in a new maternity ward. This addition will allow a place for post-partum women to rest before having to go home, which they are not presently able to do given the high-demand of the two patient beds available to the dispensary. Another aspect of our project involves education to ensure that this improved dispensary is most optimally used by the community. We are preparing reproductive health and maternal care workshops to provide a resource for women in Mkutani to learn about topics including common warning signs, menstrual hygiene practices, and proper prenatal care. These workshops are planned to take place during our next trip to Mkutani, which is planned for August 2024. During this trip, we will also check in with the contractor regarding the structural renovation of the dispensary and answer any technical questions with guidance from our structural engineering mentors from BPC who will travel with us. Our goal for the next semester is to finalize construction designs and continue preparing for our upcoming trip.

Farm and Irrigation Project Updates

BY ISELLE BARRIOS

Our project is aiming to build an irrigated garden at the Mkutani Primary School in Mkutani, Tanzania. The garden will provide snacks for the students who live too far away from the school to go home for lunch, as well as an educational tool for teachers. During the fall semester, we submitted our alternatives analysis report to EWB-USA. In this report, we looked at several potential ways to acquire water for and irrigate the garden. For water sources, we considered installing rainwater catchment on new or existing buildings, drilling a borehole, and pumping water from a nearby river. For irrigation methods, we considered surface irrigation, sprinkler irrigation, drip irrigation, and perforated pipe irrigation. Through careful consideration and analysis, we chose to pump water from the nearby river and use perforated pipe irrigation. We also began system design during the fall semester, including creating preliminary CAD drawings of the system and working with experts on water pumping and irrigation to figure out system details. Next semester, we will continue working on detailed system design and address the comments we received from EWB-USA on our alternatives analysis. While we will likely not be able to implement during summer 2024 due to time and budget constraints, we hope to be able to implement our project during January of 2025.

Member Spotlight



EMMA SCOTT

“I have really enjoyed meeting new members this year and seeing each person contribute to the team in different ways. Learning how to guide a project forward has been a challenging but rewarding experience that has taught me a lot about the importance of teamwork. I have enjoyed working on the irrigation design layout and speaking with different professionals and professors around the country to gain a better understanding of the project at hand. I am looking forward to our project moving further into the implementation phase and to see what the team can accomplish this spring.”

“To my timid and overwhelmed yet extremely eager pre-fresh self last semester, EWB was a welcoming community that encouraged me to step out of my comfort zone. From designing roof designs using CAD to planning workshops for reproductive health education, I have realized the importance of teamwork in the interdisciplinary solutions that are needed to solve the world’s toughest problems. As a member of the health and sanitation team, I have learned not only what it means to make a change in the world, but also what it means to implement a sustainable improvement in communities.”



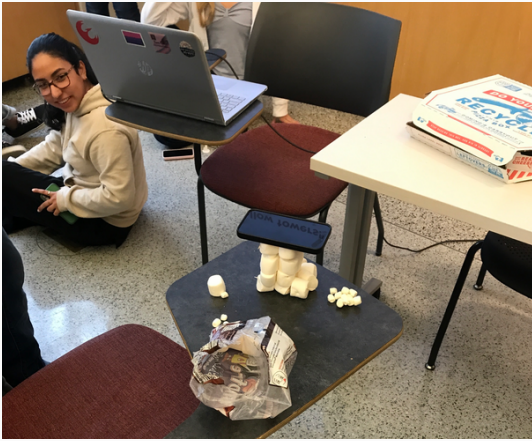
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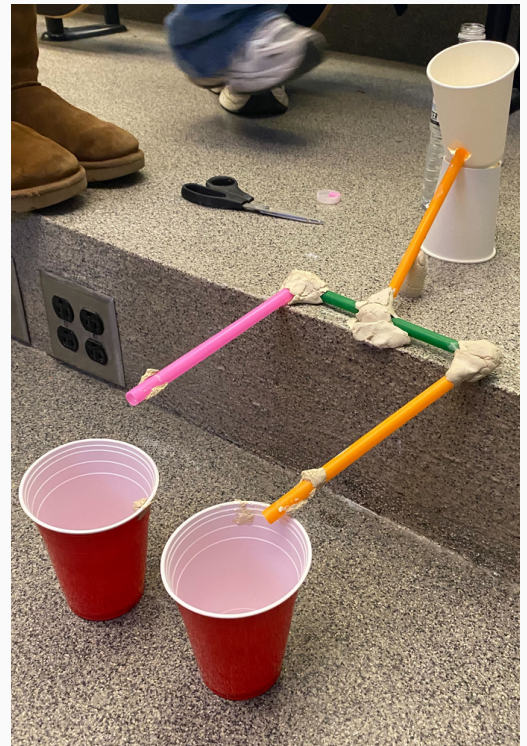
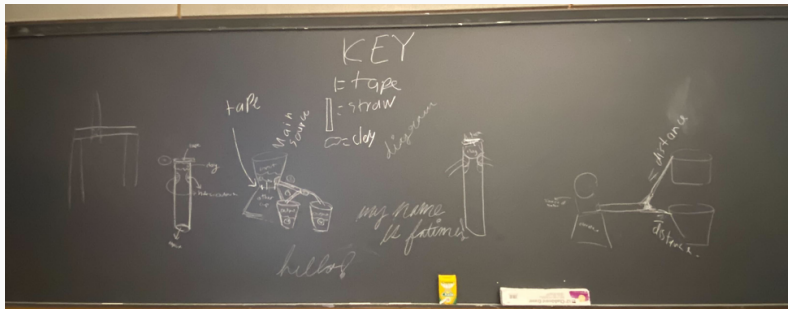


“One of my favorite experiences during my first semester in EWB was teaching a Splash class called Projects in Global Development to high school students. We developed hands on activities, and it was super rewarding to see the students get excited about problem-solving and global issues. I also learned a lot about grants and the financial side of EWB through my role as Treasurer. Next semester, I’m looking forward to continuing the implementation stage of our Farm and Irrigation project!”

Meetings



PHOTOS



MIT Splash