



ENGINEERS WITHOUT BORDERS USA
MASSACHUSETTS INSTITUTE OF TECHNOLOGY CHAPTER

NEWSLETTER

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EDITOR'S NOTE

By: Vivian Cheng '23

We are happy to share with you the long-awaited 2020 issue of our annual newsletter!

This issue will include updates on our progress through the year for all our active projects: Female Sanitation, Irrigation, Solar Manual, and a local project.

We would like to thank everyone who has supported our chapter. Thank you to our wonderful mentors and partners from the EWB Boston Professional Chapter, our faculty advisor Tal Cohen, our faculty mentor Gordana Hering, and the Edgerton Center for their continuous support and guidance. Finally, a huge thank you to our donors and members who have been the lifeline of this chapter and without whom this chapter wouldn't exist.

Thank you to everyone that helped put this newsletter together.

Enjoy the issue!

ACTIVITIES REPORT

Irrigation Project

By: Jason Ramirez '22

We have launched a new irrigation project in Mkutani, working with the Headmaster at the Mkutani school to design a test garden that will feed 200 students per day. We have been researching various irrigation methods and crop specifications, and we hope to carry out a remote assessment trip this summer!

Local Project

By: Selma Sharaf '22

This fall, we virtually partnered with a local high school in Andover, MA which mostly serves under-resourced communities. MIT-EWB members mentored high school sophomores as they researched drinking water crises taking place around the world, developed engineering solutions, and modeled their ideas using Arduino. We provided interim and final feedback and served as panelists during the students' final presentations alongside professional engineers and scientists from Lincoln Labs and the Koch Institute. We greatly enjoyed engaging with the students and hearing about their impressive problem-solving.



Our Female Health and Sanitation Team.

Female Sanitation Project

By: Amel Elawad '21

1. Spring 2020

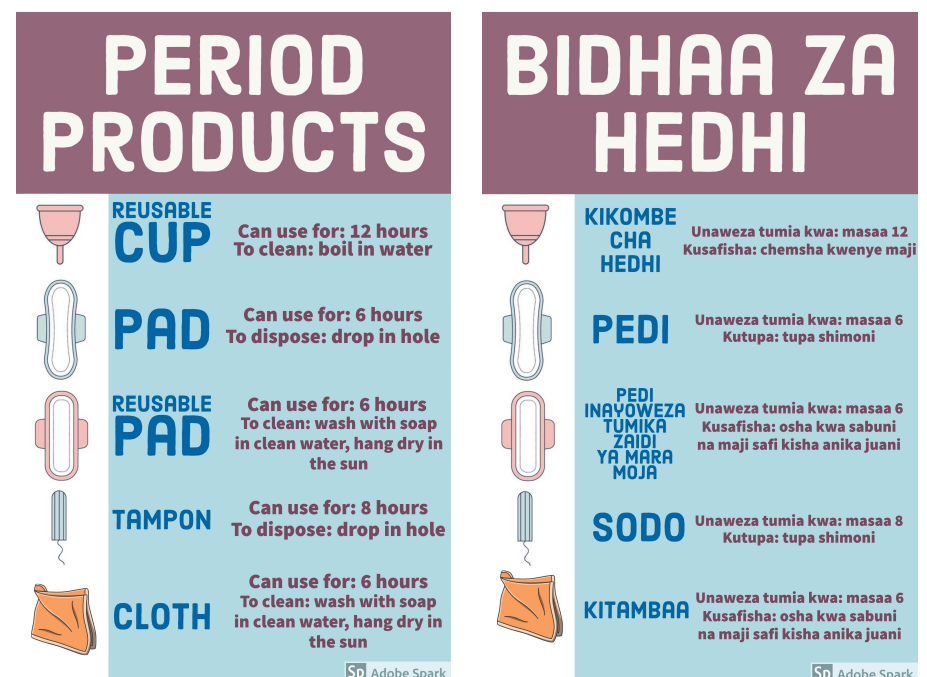
The Female Health and Sanitation team worked on the Menstruation Education Program and started designing the washroom area in the Latrines Block project led by the Boston Professional Chapter. The washroom design was determined from the focus group findings from the summer trip of 2019. Hence, it included a number of sinks as well as an area to wash and hang dry any feminine products. The aim of this additional space is to provide a comfortable space for young school girls to use while they are at school, eventually increasing the chance that they will not skip school during their menstrual time.

2. Summer 2020

FHS continued refining the design for the washroom to include educational posters designed at reducing the stigma around menstruation and encouraging the young girls to discuss it in their now safe space in the latrines. The educational posters included information on various feminine hygiene products, including notes on preventing health issues that are a result of wrong hygiene practices. The posters are in both English and Swahili text.

3. Fall 2020

FHS has been in contact with Femme International, a non-governmental organization dedicated to promoting menstrual health education, on the possibility of collaborating to host menstrual health education workshops in Mkutani, training potential educators to expand community involvement and sustainability of these educational workshops. Furthermore, FHS has been in contact with Build Health International, an organization that works with communities around the world to build high-quality medical infrastructure in resource-constrained settings, to discuss potential short term partnership and mentorship relation on designing and constructing a birthing center for the women of Mkutani.



English and Swahili versions of one of our posters.

MEMBER'S CORNER

By: Lai Wa Chu '24

This is my first year being a part of Engineers Without Borders. I joined EWB because I wanted to gain real-world engineering experience and admired the work EWB does. After being in the team for a semester, I gained a better understanding of how engineering projects come to life and learned about the various past projects EWB had. I also got to meet many like-minded students and supportive mentors. I am currently on the Irrigation Team and we're working to build a garden in a school in Mkutani. I am very happy that I get to be a part of this project from its beginning and see it grow from scratch. As the new External Relations Chair for the Spring 2021 semester, I am excited to get more involved in EWB.

MESSAGE FROM PRESIDENT

By: Selma Sharaf '22

I first joined MIT-EWB at the beginning of my freshman fall, and I am grateful for all of the wonderful people and projects this club has exposed me to over the past few years. I have enjoyed watching our partnership with Mkutani grow each year. Serving as president of MIT's chapter of EWB this semester has been a great experience, and I look forward to the remainder of my term. The COVID-19 pandemic has presented many challenges to our organization—remote meetings, time zone differences, and uncertainty regarding travel, to name a few. Despite this, I am constantly amazed by our members' resilience and dedication to our work, which has allowed us to accomplish a great deal.

The exec board met throughout the summer, Chris and I transitioned roles in late August, and weekly general body meetings and team meetings for this academic year started in early September. We currently have three project teams, focused on Female Health and Sanitation (FHS), Irrigation, and Solar Education, in addition to a local high school mentorship project. All three major teams are working with the Mkutani community in Tanzania. The FHS team, led by Amel, is working on an education project and workshops that will be implemented alongside a renovation of the girls' latrines at the Mkutani school, as well as planning for the construction of a birthing center private to women. The irrigation team, led by Jason, is working on creating an irrigation system and test garden near the school. The solar education team, led by Diego, is continuing to revise our solar pump manual and maintenance workshop. Our partnership with a high school in Andover, Massachusetts has allowed us to work with younger students as they develop solutions to drinking water crises and prototype them using Arduino. Until the end of the summer, we were also working on a structures project involving the Mkutani schoolhouse renovation, but the Boston Professional Chapter (BPC) has now fully taken on this project and is able to take advantage of its access to professional engineers and architects.

EWB-USA has implemented a travel ban through May 2021, but we are planning to travel during summer 2021 if the situation permits and we are confident that this will not put anyone at risk. Remote implementation through local contractors is another possibility we are considering, and this has already been trialed successfully by BPC.

I would like to thank all of our donors and supporters—none of our projects would be possible without you. I would also like to thank the Boston Professional Chapter for their support and for our invaluable partnership, as well as all of our mentors from MIT and the Edgerton Center for their advice and assistance. I would like to thank the Mkutani community, for welcoming us and allowing us to learn from you and work with you towards a common goal. Finally, I would like to thank every member of MIT-EWB. Each of you has stood up in some way, whether by taking on an exec position, contributing ideas, researching a solution, or planning a fundraising initiative. This organization relies on so many individuals to be successful, and I am grateful to be a part of it.



A general body meeting in Fall 2020.



Our Irrigation Team.

DONORS' CORNER

Thank you to all of our donors for your support! Our projects would not be possible without the generosity of those who have contributed. We appreciate the overwhelming support that we have received from community members, companies, and departments and organizations at MIT.

Our major sponsors receive prominent recognition on our website and recruiting opportunities with our students, and we plan to expand these recognition programs starting in Spring 2021. We feel very passionate about our projects and are happy that others share our motivation for making a difference!

If you are interested in joining our community as a financial supporter of EWB-MIT, please consider donating any amount through the MIT Crowdfund platform accessible through our website and social media, or reach out to ewb-exec@mit.edu for more partnership options.