



EWBlast!

Engineers Without Borders—Yale Student Chapter

Spring 2013

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Vision:

EWB-USA supports community-driven development programs worldwide through the design and implementation of sustainable engineering projects, while fostering responsible leadership.

Yale SCHOOL OF ENGINEERING & APPLIED SCIENCE

Dwight Hall at Yale

Dear supporters of EWB Yale Student Chapter,



EWB-Yale team members in Cameroon

It is an exciting time for EWB at Yale. During 2012, we concluded our six year project in Kikoo, Cameroon. With the gift of a handcrafted clock, we, along with the Kikoo community, celebrated the end of a six-year effort that culminated with a 9 km network of pipelines, 2 storage tanks, 14 public standpipes, and improved latrine facilities. Last summer, we also began working on our current project, in the neighboring village of Rohvitangitaa, where a faulty water system limits access to clean water for 1,200 people.

We kicked off the 2012-2013 academic year with design workshops, and a tentative blueprint of the new system is in hand. Current efforts are focused on our upcoming

implementation trip this May, when we hope to construct a 20,000 L storage tank and begin health education and vessel sanitation campaigns. Our rigorous public health work, most recently manifested in our 2012 baseline health survey, has been made possible by extensive collaboration with the School of Public Health and the Global Health Leadership Institute.

As the chapter moves into its tenth year since our founding in 2004, we would like to recognize a couple of special people we will miss. We thank faculty advisor Bill Mitch for his commitment to our chapter as he moves to Stanford, and we are excited to welcome Dr. Jordan Peccia as our new faculty advisor. We would also like to thank Damian Kongso, who passed away last summer, for his vital support in Kikoo.

Thank you so much for your continued interest in our organization, and we hope you enjoy reading about our growth and progress as a chapter. We are excited and humbled to contribute to a tradition of dedicated work that began long before our arrival at Yale.

-Daniel Kim YC'15 and Nathaniel Knapp YC'14, Yale Student Chapter co-presidents



The EWB-Yale team, 2012-2013.

An Update on Roh by Natalie Pancer YC '14

Over the past five years, our chapter has worked on a water distribution system in the rural village of Kikoo, Cameroon, with the main goal of improving health by reducing waterborne disease incidence. The system is now complete and consists of 2 storage tanks, 14 standpipes, and over 7 kilometers of piping connecting the catchment to the larger system. Furthermore, ventilated improved pit latrines were put in place in order to improve the sanitation of the community.

Through our work with Kikoo and our several trips to the village, we had many interactions with people living in Rohvitangitaa (Roh), the community that borders Kikoo to the west. Our experience in the area and our desire to respond to the clean water needs of the Roh community led us to take on our current project, the Roh water distribution project.

In May 2012, a group of 7 people traveled to Cameroon with two goals: to perform a final inspection of the Kikoo system and to to conduct

health surveys and topographical surveys of Roh in order to begin our new project.

The first goal was met by performing a walk-through of the now complete Kikoo system to identify any residual problems, and by having a symbolic handing over ceremony of the system. Our engagements in Kikoo ended with a ceremony in which we voiced our suggestions for the future health of the project and symbolically handed the system over to the people of Kikoo.

Our second objective was to begin assessment for the Roh water project. We

worked with our local partners and NGO's to plan meetings with Roh community leaders and the Roh water committee. We inspected the existing Roh water system and determined potential standpipe and storage tank locations. Also, we traced the route of the proposed pipeline topographically to start design calculations. Lastly, we conducted a pre-implementation health survey to serve as a benchmark for measuring the health and sanitation practices of the community.

Overall, the trip was very successful and we are looking forward to returning to Roh to complete the proposed system.



Republic of Cameroon

Location: West coast of Africa, between Nigeria and Gabon

Capital: Yaoundé

Official Languages: French & English

Population: 20.1 million

Population without access to clean drinking water: >50%

May 2013 & Future Plans by James Doss-Gollin YC '15 & Hannah Mae Robinson YC '15

This upcoming May, we will be traveling to Cameroon along with several other students and our professional mentor. We are really looking forward to this trip to the community of Roh. We have been a part of EWB for two years, and I have heard and learned so much about this region. Our group has been working on this project for the past year, and we cannot wait to be able to visit and take part in the hands-on implementation work.

Last May, we completed the preliminary health survey, and we are now ready to begin construction. The main purpose of the trip will be to build a storage tank, which will help maintain a strong water flow throughout both the rainy and dry seasons. There will, however, be other important aspects to the trip, which is educating children on the importance of sanitation, the disease cycle, hygiene, and more. Since we will begin the actual construction on this trip, it will set the tone for the rest of the project, and we look forward to a successful experience.

On future trips, groups will be working to expand the water system by laying pipe and installing standpipes for access to water. In addition, as this project continues to grow, we also look forward to having our group grow through increased involvement as we continue to raise our visibility on the Yale campus.





Learning about Water & Health by Laura Skrip

The primary goal of our project in Rohvitangitaa is to provide the community with clean drinking water in order to significantly reduce the incidence of waterborne illness. To help us evaluate the ultimate impact of the system, we conducted a baseline health survey during our May 2012 trip to Cameroon. The results of this survey will be compared with data collected post-implementation of the distribution system.

Prior to leaving for Cameroon, we developed a health survey based those used by the Demographic and Health Surveys program and UNICEF. A back translation process was also undertaken to ensure the cultural and linguistic appropriateness of each question. Each day of our trip, four EWB members and a community member took part in health survey administration by visiting families. The survey involved questions on past-28-day symptom prevalence, primary uses of water use, and water handling and related hygiene practices.

A total of 119 households consisting of 402 adults and 430 children participated in the health survey. Nearly 90% of all surveyed households reported at least one occurrence of diarrhea, fever, stomach pain, or vomiting within the past four weeks. Additionally, bacterial contamination was found in over 70% of all households' drinking water samples. We are using the data to develop a health education program to ensure that when people start using the new system they will enjoy the full health benefits of clean drinking water.



Our group in Cameroon.



Pen pal letter exchange.



Erasmus celebrating the system completion.

Yale Day of Service

Our upcoming trip to Cameroon has been chosen as a Yale Day of Service location this year! We would like to thank the Association of Yale Alumni for recognizing our work and this project. You can find more information about this on our both our website and the Yale Day of Service website.



Get Involved!

Please contact us if you have questions or suggestions. We are grateful to the many people who have contributed towards our projects; as we are a non-profit organization independent from Yale University, this work would not be possible without your continued support.

Our current wish list:

- Engineering professionals interested in serving as mentors.
- Water quality test supplies.
- Tours of local power plants, water treatment plants, industrial facilities, etc.

To make a donation:

All donations are tax deductible. You will receive a tax deduction statement from EWB-USA.

By check: Please make checks payable to Engineers Without Borders—Yale Student Chapter and mail to the address below.

By credit card: On the EWB-USA website (www.ewb-usa.org), select 'Donate', 'Specific Chapter', 'Yale University' and follow the easy online instructions.

A Freshman's Take by Patrick Wilczynski YC'16

When I first came to Yale, I was bombarded with a storm of invitations to join extracurricular groups. My email inbox was filled with messages from improv groups, political organizations, dance teams, and every other kind of group imaginable. Anywhere I went, I saw posters for club sports, a capella groups and academic societies. Out of all this noise, one group really spoke to me—Engineers Without Borders. I was introduced to the group by an older member who had gone to my high school, and after attending the first few meetings, I was sure that it was going to be a part of my life for the duration of my Yale career.

Engineers Without Borders is a truly amazing group. Unlike many of the engineering groups on campus, we work to solve real world problems, with results that directly improve the quality of life for others. Knowing that I am contributing to helping save individuals in Cameroon from disease, and that I am improving the lives of people half a world away is an incredible feeling, and I take great pride in being part of a group that does such amazing work. In addition, I think that EWB is unique in that it does not just raise money for some cause, then throw the money at the problem. Rather, EWB gives us the chance to create a solution to that problem, which is a rare and valuable experience.

I have been simply astounded by my experiences with EWB thus far, and I look forward to continuing my work with the group in the future. I am especially excited to see the growth this group makes during my four years at Yale.



May 2012 trip team outside of Kikoo village.

<p>Contact Us!</p> <p>www.yale.edu/ewb</p> <p>ewbyale@gmail.com</p>	<p>EWB-YSC</p> <p>PO Box 206615</p> <p>New Haven, CT 06520</p>
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