

Abstract

The purpose of this project was to travel to Ghana to implement several pilot plastics recycling programs in different areas of the country. Along with the physical implementation of the project, the group also worked to educate various communities about the importance of plastics recycling and the broader issue of environmental justice. The main goal in the capital city of Accra was to equip the largest residence hall and a student market-place at the University of Ghana with recycling receptacles. The group worked at the Kwame Nkrumah University of Science and Technology in Kumasi to set up both recycling and trash containers in various central locations on and around campus, including the student commercial area, the University Hospital, the taxi junction, and two nearby secondary schools. In the smaller coastal fishing village of Senya Beraku, the GIEU scholars collaborated with community youth organizations to provide the town with an enduring plastics recycling system. The students have returned to the University of Michigan campus with hopes of sharing their GIEU experience and communicating to others the importance of viewing the world through a multi-faceted cultural lens.



Locations Visited in Ghana

Accra is the nation's capital and largest city, with a population of about 4 million people. Accra is more westernized than other cities in the country- it is home to Ghana's sole shopping mall. It is the political and commercial center of Ghana. Most visitors to Ghana will spend time in Accra. It is also the home of the University of Ghana, Legon, which has about 40,000 students.

Kumasi is Ghana's second largest city, with a population of about 1.5 million. It is the capital of the Ashante region, and is considered the cultural capital of Ghana, because a lot of the traditional crafts originated here. It is slightly less crowded or accessible than Accra, but many tourists visit there as well. Kwame Nkrumah University of Science and Technology is in Kumasi.

Senya Beraku is a small fishing village about 40 miles west of Accra. There are about 10,000 residents. Senya is a fairly rural town. Most of the economy comes from fishing though it is a fairly impoverished town. Though it is very close to Accra, few tourists visit Senya. It is much less modern and accessible than the larger cities.

Pre-departure

Before leaving for Ghana, we held a series of team meetings to prepare for our project. For each meeting, we broke into smaller groups of 3 or 4 students to research and write brief reports on various recycling topics such as the history of plastics recycling in America and the current state of plastics recycling in America. For our final report, each group prepared a brief plan for potential implementation strategies in Ghana.

Throughout the months leading up to our departure, Professor Kannatey-Asibu was in contact via email with various important connections in Ghana (Appendix A). With his pre-existing relations to community members in the three locations we would be staying, he was able to organize the logistics of our trip. He notified both the University of Ghana Legon and KNUST about our future project and organized teaching assistants to lead us while we were there.



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GIEU 2009 Ghana- Kumasi Plastics Recycling



Professor and Site Leader: Elijah Kannatey-Asibu, Jr.
Student Fellow: Kyra VandeBunte

Accra, Ghana

During our two-week stay in Accra, we implemented a recycling program at Commonwealth Hall on the University of Ghana, Legon campus and the Bush Canteen. Commonwealth Hall is a model all-male dormitory that is maintained largely by the students and would be well-equipped to carry on the project after we left. The second location was Bush Canteen, a busy market place on campus. We chose this area because a plastic sachet collection system was already in place.

We also visited two schools (Action and Presec) to educate secondary students about the benefits of recycling plastic waste. On the University of Ghana campus we designed flyers and placed them around the locations of the bins.

Our group visited two recycling plants in Ghana to gain a broader perspective on the country's waste management and recycling system. The first facility was called City Waste Management Co., a large facility that is currently operating out of a much smaller temporary location with one working machine until the main plant finishes renovation work. The next plant was Creative Plastics Co. Ltd. in West Accra. This plant was more established, and had many more machines in operation. Creative Plastics Co. Ltd. already recycles other materials, including glass and cardboard, with more advanced facilities, but unfortunately the plastic recycling capabilities are not as developed.



Kumasi

We decided to implement our project at several areas at and around KNUST: Tech Junction, the University Hospital, the Commercial Area, and two nearby secondary schools. All of these locations were close in proximity to one another, generated a lot of plastic waste, and had lots of foot traffic. The major waste management company in Ghana, Zoomlion, donated 12 bins for us to distribute. We were given 8 larger plastic bins with flip tops and 4 smaller plastics bins with removable tops. Each of these plastic bins was placed next to a trash can facility so that trash could also be reduced in the area. At KNUST, we utilized the same education process as in Accra.

Senya Beraku:

Upon arriving in Senya we met a local representative and our volunteers to discuss our project and their potential involvement. We briefed our volunteers on our project as well as the benefits of plastics recycling. With their cooperation we divided the town into 7 sections and designated a group responsible for each section. After explaining our project and the benefits it would bring to the local population, we decided on ideal locations and the ideal number of bins we would need.

Each group was given 5 bins to distribute in their designated area for a total of 35 bins. The remaining 15 were placed at certain key locations around town including 9 schools, the bank, police station, health center, library, Fort of Good Hope, and the Ant Hill Hotel.

Due to the lower literacy rate in Senya we relied more heavily on symbols rather than words in our markings on the bins. We placed recycling symbols around the walls of the bins, taped two water sachets on the sides of the lid, and wrote "Plastics Waste Only" on the swivel top.

Obstacles

We navigated many obstacles during our field study in Ghana, including problems facing the nation as a whole, difficulties regarding the sanitation process, challenges unique to each region we focused on, as well as hurdles we encountered both working in a different culture and within our GIEU team.

Sanitation Obstacles

- * Lack of waste processing plants and recycling facilities, nationwide
- * Incompleteness and incoherency of the plants' recycling capabilities.
- * Meager monetary incentive for individuals to recycle

Regional Obstacles

Greater Accra

- * No collection points within or close to campus
- * Closest recycling facility, City Waste Management, Ltd., only had a temporary plant in operation
 - o Plant owned only two machines for processing the plastics
- * A lot of red tape within the university system
- * Zoomlion Ghana, Ltd., the national sanitation company, was slow to offer their support

Kumasi:

- * Zoomlion agreed to collect the plastics, but there is currently no plastics recycling facility in Kumasi
- * No guarantee of collected plastics actually being recycled

Senya Beraku

- * Language barrier. None of us understood or spoke Effutu.
- * Severe disconnect between proclaimed concepts, genuine understanding, and action in the context of limited resources.
 - o Styrofoam boxes and plastic spoons strewn across the beach by the Golden Star members who helped implement our project within the village
- * No general waste disposal system for the town

Cultural Obstacles

- * Leniency in punctuality
- * Subtleties in ways of expression
- * Language barrier

Intergroup Obstacles

- * Excess of students needed to complete any given task
- * Some voices unheard during periods of intense debate



The group was able to have the experience of staying with several families for a week while in Accra. Each home had two or three GIEU students living and eating with them. The families taught the students about cooking, life in the workforce, what it was like to grow up in a Ghanaian home, and important values that they held. It was one of the most culturally rewarding portions of our stay in Ghana.



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Lessons Learned

Pre-Departure Preparations

- Procuring supplies.
- Contacting vendors.
- Additional familiarity with the culture.
- Additional team meetings.

Implementation and Education

- Focusing on one location.
- Additional time to monitor bins.
- Find community partners with a strong interest in the project.
- Find an audience.
- Expect cultural differences and circumstantial differences.
- Be prepared to explain and justify your project, especially to yourself.

Team Dynamics and Decision Making

- Decentralize decision making.
- Debriefing is vital to the process.
- Be prepared for downtime.



Here we are posed on the steps to the Commonwealth hall after an exciting day of recycling.

Appendix A: Contact Information

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