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2018 Ningxia Project Report- SEE 1

Tongxin is the county in the region of Ningxia, which is a part of the People's Republic of China. Ningxia is located along the Northern border of China, near Mongolia. I traveled to this region of China and spent a majority of my time in the village of Da Gou Yan. This village housed around 2000 residents and a majority of the people made a living off of farming and raising livestock. Most villagers lived in either brick or concrete houses and the city did not have a proper plumbing system. The landscape was quite dry other than the Yellow River which ran through the village. One of the more prominent social characteristics of this community was the Hui Muslim culture. The Hui Muslims are one of the few Muslim minorities in China that have been able to avoid discrimination by the government because they have largely assimilated with the Han generations of the Chinese. The people in Tongxin are devout followers of Islam, therefore bringing about common Islamic traditions and customs. In the village it is common to see women wearing headscarves, the practice of Ramadan, and Arabic text in houses and on local signs.

Currently, both China's population and economy has been growing at a rapid rate, with their GDP increasing by 10% because of growing production. With this economic growth however, there is also an extreme environmental risk. China is facing environmental problems such as water shortages, soil pollution, desertification, overpopulation, a drop in biodiversity, and air pollution. Air pollution is especially bad

in Beijing where the pollution can be felt and seen. The pollution in the air is also being transferred to local water sources in China, which makes the water hazardous to drink and is killing off fish and other forms of life. These arising environmental problems are not only faced by China, however and can be felt all around the world. Nepal is another area in which the water quality is extremely bad due to the lack of proper sewage systems.

With the many problems faced by China, my SEE group decided to step in and try to alleviate the issue of water pollution in the Da Gou Yan village. We addressed the water issue by bringing in two newly patented filters created by large corporations. We brought in Mesopaper and EverWater. Mesopaper is composed of three layers of bamboo paper with a 99% removal rate of arsenic, heavy metals, and radioactive elements and it is NSF certified. EverWater on the other hand is a physical filter that uses a coconut filter cartridge in the center.

We began our project by interviewing eleven villagers about their water. We found that a majority of the villagers use Yellow River Water, rainwater, and tap water (filtered Yellow River water) for drinking and cooking. One of the villagers we interviewed even mentioned that the tap water he drinks had given him a kidney stone, and he had to get surgery to get it removed. Being in surgery left his family without a proper income for a month. This was a moment that really hit me in the beginning of our trip. Hearing the stories like this in Ningxia reminded me how different I am from them. I have all these luxuries of buying new clothes or a new car and they have to worry about something as small as the water they are drinking. On the first day we arrived to

the village, I was shocked because of the amazing meal some villagers made for us. Although their situation was worse, they were still willing to offer us food and comfort with so much compassion. Their kindness made me want to help the villagers out even more, motivating me to find a solution for their contaminated water.

Testing began by measuring the amounts of arsenic, heavy metals, and radioactive elements in Yellow River water, rainwater, and tap water without any filtering. Yellow River water and tap water were heavily contaminated and were at unsafe levels of consumption. We were able to filter the contaminated water through both the Mesopaper and EverWater systems and both came out clear with reduced contamination levels. We ended up choosing only Mesopaper to distribute to the villagers because it was much faster, lightweight, and affordable.

Although our findings and distribution were very successful, our first few days in the village were very stressful. Our group leader Alex had brought three testing kits for the water, but his luggage got lost so we were left with one, and this kit was only for one time use. Later, four more testing kits arrived but they could not tell us the exact levels of contamination so our results were inconclusive. We at last received proper testing kits on the second to last day and we were finally able to test the water accurately. All of the waiting and disappointment took a toll on the group's motivation. As co-leader, I had to learn how to motivate others to keep a positive attitude. I also learned as a leader how to facilitate others. Since my group combined SEE 1 and 2, we had a very large group and many times, group members would be sitting around doing nothing. I learned how

important it is to assign roles to everyone and plan ahead so our work could be productive.

From my short time in the village, I learned so much about myself and the world around me. It's so different to hear someone tell you there is poverty in the world versus seeing it with your own eyes. I learned that anyone can be assigned a leadership role, but being a good leader takes experience and effort. I hope that I can come back next year and continue our project. If the villagers like Mesopaper, we should establish an easy system for them to obtain the paper. We should also search for faster and more reliable solutions to filtering.

Sources Used

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