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Sustainability Summary: Environmental Pollution

This past April, the Sustainable Urban Development class embarked on the interactive part of the course: visiting China for two weeks. We had a great time while we were there, but preparing for it was sometimes challenging. Essentials included enough clothing for two weeks of sightseeing, listening and giving presentations, and exploring the cities, comfortable walking shoes, sunglasses, camera and charger, and other normal travel gear. The essentials we weren’t expecting to bring were tissues to use in the public bathrooms (since there’s no toilet paper), vitamin C, allergy medicine, and pepto bismol. The best way to get money at a good exchange rate was to withdraw it from an ATM using your debit card and to get more than you would think you’d need because almost nowhere we went took credit cards. I don’t think anyone spent over $250 (approximately 1500 Yuan) because everything there was pretty reasonably priced and the exchange rate is in favor of the dollar. Staying connected with family and friends is relatively easy since we could use wifi in the hotels and at the universities, but the only way we could connect was via facetime, email, and instagram because the other social networking sites are banned. Another surprise was that not a lot of people spoke English, and we didn’t know any Chinese so communication between us and the locals was rather difficult at times. We also didn’t anticipate how many cars were in the city and that they could just drive wherever they wanted; even on the sidewalk. I now have no fear when crossing the street.

In regard to the project, I explored the effects of environmental pollution in cities and the people that live in them. There wasn’t too much directly said about this topic in the lectures, but overall the professors and researchers at the universities agree that China has a long battle to fight with pollution. So far, the government has passed a series of reforms to reduce the emissions from large industrial plants. These reforms are new and are slowly taking effect, but in the future we should see a huge decrease in greenhouse gas emissions.

Environmental pollution is a serious problem for most of the industrial world. It causes strange weather patterns, health problems, and doesn’t provide a stable atmosphere for plants and animals to live. In China, the sulfur dioxide and soot produced by coal combustion fall as acid rain on almost thirty percent of the country. This rainwater is not drinkable unless purified and puts another barrier on industry to find ways to purify acid rain. While we were in China, we visited a lab that is creating and testing ways to filter the sulfur out of emissions to reduce the amount of acid rain that falls each year. Most of their machines are still being tested, but they are working hard and coming close to finding a solution. Another way that China is working to reduce its emissions is developing and investing in sustainable public transportation. In Ji’nan we visited the BRT (Bus Rapid Transit) system which is a new bus system that uses low-emission fuel, has specific lanes on the road so it’s faster, and is a little more expensive to keep the lower class people out. They want this public transit to be used by the middle class instead of buying cars which will cut down the fuel emissions from cars and promote public, government-funded transit.

As far as health risks, environmental pollution can cause a lot of problems for people. Photochemical smog contains ozone that irritates the respiratory system and can make it hard to breathe and reduce lung function. Particulate matter can get in the lungs and cause people to be more at risk for heart or lung disease. Pollutants increase the frequency of cancer and birth defects in populations of people that live in heavily polluted areas. As of now, people in China wear masks to protect themselves from the harsh pollutants, but their effectiveness is heavily scrutinized. All around the world we are currently looking for ways to combat the effects of pollution on the body. In theory, if the industries are aware of emissions, their causes and health risks, then they also know how to prevent them and can build new branches that will last longer and stay greener. This is how sustainable cities will one day be the only cities.

I had such a good experience on this trip. I went with twenty people I didn’t really know and then came back with twenty new friends. The parts of the trip that were really helpful and fun were hanging out and getting to know the students at BJUT and Shandong University because we got to see how people our age live in such a different place and how similar or different they are from us. I obviously enjoyed seeing the big sites such as the Forbidden City, the Temple of Heaven, and the Great Wall because they are all beautiful, iconic representations of old China. Visiting the 798 art district and the Hutong gave us an idea of what life in China is really like for people that live there. They weren’t places tourists normally go and gave us insight as to what people do in their spare time, how they live and eat and interact with one another. I would have to say the best part of the trip was the food. Every meal we ate together as a group was cooked to perfection and served on a huge lazy susan in the middle of the table. For the most part we had no idea what we were eating, but it tasted good so we didn’t necessarily need to know. I would highly recommend this course to anyone who wants to travel and get a little outside their comfort zone and I wouldn’t change much about the itinerary we had while we were there. The only thing I would suggest is adding one or two completely free days so the students can explore and get to know the cities better. China is not a place to vacation, but is definitely a place to learn about the past, present, and future of sustainability and definitely not a place I’ll soon forget.