



Barriers and motivational factors when implementing sustainable building materials in Ghana

Before departure

I went on an exchange semester in Valencia during the spring of 2022 and that was one of the greatest experiences so when I had the chance to go abroad to do a minor field study, I had to take it! My thesis partner and I decided to apply for this only a month before the deadline, so we didn't have much time to find a project. Luckily, we got in contact with Engineers Without Borders Sweden (EWB-SWE). They had begun a small collaboration on distance with a social enterprise called Social Enterprise Ghana (SE Ghana) in Accra. They wanted to develop this partnership, so we decided upon the destination. Our task for this MFS was decided through discussions with EWB-SWE and we concluded that we were to do a feasibility study on sustainable building materials.

Before traveling to Ghana there are some recommended vaccinations and then one mandatory to enter the country which is yellow fever. We decided to take all vaccinations that were recommended, and it cost around 3500SEK. We also needed to apply for a visa which we should have done earlier because we got our visas only a few days before departure. We thought that we needed to have our accommodations in order before applying but this was not the case, so we could have done it earlier. Ghana has no embassy in Sweden, so you must send your passport to Copenhagen in Denmark with FedEx. Also, the embassy in Denmark was not easy to communicate with. So, I recommend to apply for the visa as soon as possible.

The official language in Ghana is English so no language preparations were needed.

Upon arrival

We planned to start the project a couple of days after arrival. We arrived on a Monday and SE Ghana invited us to their office on Wednesday. However, the Executive Director that was supposed to welcome us was away at a workshop. A couple of other colleagues welcomed us and introduced us to the company. Together with them, we decided to come back to the office next Monday. So we got one (unplanned) week off before starting our project. From that point, we worked on our project up until our last day at the office.

Financials

Overall, it was less expensive in Ghana compared to Sweden regarding local food (imported food was however very expensive), restaurant visits, and transportation. Bolt and Uber work great and are very cheap. A 30-minute ride costs around 35SEK. Then you can also travel for much less if you take the local buses TroTro. But the housing prices are very expensive, so it was not easy to find affordable accommodation during our stay. We got help from SE Ghana and decided upon a one-bedroom apartment that cost 3000 American Dollars for two months. We decided between two different apartments but this one had a better location, balcony, and pool. Even though it was quite expensive we were very pleased with our decision. The accommodation provided security 24/7 and cleaning twice

a week was included. Everyone was very friendly, and it always felt good to come back to the apartment.

They use Ghanaian Cedi as currency and it is very close to the Swedish currency so it was never difficult to calculate prices.

Project

Our task as volunteers for EWB-SWE was to conduct a feasibility study on sustainable building materials. EWB-SWE didn't have a specific project in mind to do a feasibility study on, so we focused on analyzing the market for sustainable building materials as well as evaluating SE Ghana and their potential as a future partner. Our data collection was qualitative, so we reached out to companies that worked with sustainable building materials, mostly rammed earth and interlocking earth bricks, to interview them. For our master's thesis, we wanted to investigate the barriers and motivational factors when implementing and working with sustainable building materials, so we also asked about that. We were free to use the office as we pleased. Usually, we went to the office at 09:00 and went back around 14:00-15:00 and continue our research at home. We almost never took any breaks when we were at the office, so we got tired after a while and therefore needed that break to go home. It was not like we were not allowed to take breaks but there was not much to do during the breaks and too hot to go out during lunch so we just worked instead.

SE Ghana provided us with a place to work and everyone at the office was very kind but there was not so much more support than that. They lacked experience in the construction industry so there was not much they could do. But we reached out to companies in the industry and got the interviews and data that we needed. So it worked out fine. In the end, we held a presentation about our findings at the office.

Country

We spent our two months in the capital of Ghana, Accra. Ghana is one of the African countries that has come quite far regarding economy and politics, but there are of course still cultural differences when it comes to food, local languages, manners, traffic, etc. Accra is a big city filled with all kinds of restaurants, stores, nightlife, and friendly people. We never felt unsafe, however, we never went walking on the streets when it was dark. Most often you need to take a taxi anyways to get from one point to another so that was nothing that felt like a restraint. The biggest cultural difference that we came across was connected to time and schedule. If a meeting was set up for a certain time, you could be waiting for a couple of hours before that started. Also, sometimes we felt like there were a lot of talks and not so much business (mycket snack, lite verkstad). For example, some people might want to impress you and therefore make promises about having connections to people that you wish to interview but then you realize that the setup won't happen. That could be frustrating, but we made sure that we planned most of our meetings ourselves.

Leisure and social activities

During our spare time, we did not do that much actually. Not that there was a lack of activities, there are a lot of different things that one can do if you have the energy! The first couple of weeks we just wanted to relax by the pool and stroll through the mall because we were quite tired from just moving there. So, we took it easy in the beginning. But some of the things that we enjoyed was going out for dinner, they have a great supply of restaurants that are good. We went to a hotel by the beach a couple of times to just relax and enjoy some food and drinks. We went on a trip one weekend to Busua (a 6 hour drive along the coast from Accra) to surf, learn some of the local languages and meet new people. That was a great experience, and we had a lot of fun!

The same woman who planned that trip also arranges language courses during the week at different restaurants so that is a way to meet new people. However, we (my thesis partner and I) spent most of our time together and just explored the city. Our focus was mainly on collecting information for the

thesis and less on traveling around the country. But if one wants to do more of that, there are several waterfalls to visit, national parks, and additional coast cities. One should go to cape coast if the chance is given. The cape coast castle (an old slave castle) is located there and the town is filled with history.

Sustainability

Since there is a lack of a well-functioning public transport system it was very difficult to travel in a sustainable way. We had to use the Uber/Bolt to get to the office and back home. As mentioned, there are some local buses that you can take but they will leave once they are full, so it is difficult to plan your trip and the bus station was not very close to where we lived. It is also very hot so walking long distances or going by bike was not favorable. Sadly, there is a lot of plastic everywhere. Waste management is still behind while the use of plastic is super high. In the grocery stores, they pack your groceries for you and use as many plastic bags as they possibly can. Of course, we filled up our backpacks and brought our own bags but it is evident that sustainability is far from everyone's priorities. Although, our accommodation recycled plastic and used food waste for the chickens that they had in the garden so we could absolutely do good at home!

Since our project focused on sustainable building materials and different factors around that, our work in Ghana has naturally been connected to sustainable development goals. The project has been closely related to the 11th Global Goal "*sustainable cities and communities*" and more specifically target 11.A "*Support least developed countries in sustainable and resilient building*". However, our project has been more of a research project and these Sustainable Development Goals would be achieved if EWB-SWE decides that they want to do a project focused on sustainable construction methods in Ghana. Moreover, this project is connected to the 17th Global Goal "*Partnerships for the goals*" as knowledge on technical solutions, cultural approaches, economic information, and much more has been shared between SE Ghana and EWB-SWE.