

**MFS REPORT****Name**

Year and term for exchange

Rahel Zeru

Spring 2023

**Country for the project**

Nairobi, Kenya

**Degree programme**

M.Sc. Industrial Engineering and Management

## Circularity in Nairobi's municipal solid waste management system

### Before departure

My interest in applying for the Minor Field Studies was piqued when I attended a seminar at KTH about the program. At the time, I was looking for a way to connect my master's thesis to a study abroad, so the timing of the seminar was perfect. With the help of the program coordinators, I got in touch with a contact person at SEI Africa, in Nairobi, who showed interest in my research proposal. Since the proposal was related to one of SEI's projects at their headquarters, I saw this as an excellent opportunity to link it to the city of Nairobi.

Prior to my departure, I collaborated with my supervisor at KTH and my contact person at SEI Africa to plan the fieldwork. Additionally, I applied and obtained a research license as it is mandatory when conducting any research in Kenya. I also applied for a tourist visa, received the recommended vaccinations for the trip, and planned for accommodation beforehand.

In Nairobi, English is widely spoken given that it used to be a British colony before. Although I did not take any classes to learn KiSwahili, I found it easy to get around without knowing the language. Moreover, some phrases I had picked up during my previous visit to Zanzibar came to be useful at times.

### Upon arrival

On Monday, February 13th, I arrived at Jomo Kenyatta International Airport. After completing the immigration process, I purchased a SIM card from one of the shops outside and took a cab to the accommodation I had booked. The plan for the first day was to settle down, obtain the necessary information I needed for my first day at SEI Africa's office, and get some rest.

The next day, I started working on my project with my contact person and other colleagues at the office. While I had organized most of the project myself, I received great assistance in terms of getting in touch with relevant people working within my research field and with different stakeholders.

### Financials

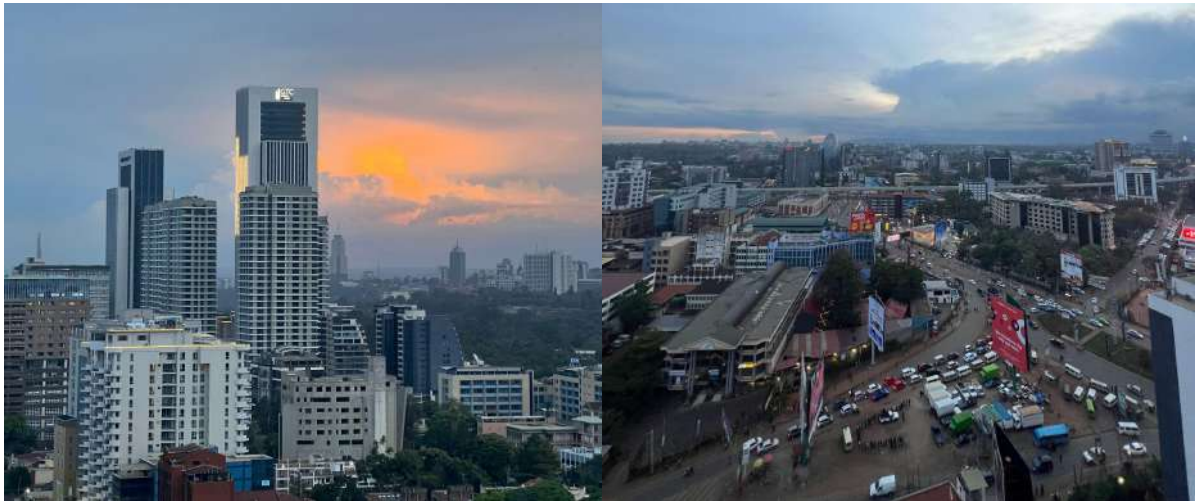
In general, the cost of living in Kenya is relatively low for a Swedish student. During my stay, one Swedish krona was equivalent to approximately 12 Kenyan shillings, which made food, accommodation, and transportation to become noticeably cheaper than in Sweden. For instance, I could buy a 1-liter bottle of water for 5 SEK, have lunch for 20-25 SEK at the office, and pay 50 SEK for a one-hour cab ride. Although the MFS scholarship covered most of my expenses, I had additional funds available from CSN and other scholarships in case I wanted to do a special activity during my spare time.

One interesting thing I noticed in Nairobi is that prices for different activities were divided into three categories: Citizen, Resident, and Non-Resident. Non-resident prices were typically quite high compared to prices for citizens. Another observation was that everybody uses M-Pesa, a mobile cash app connected to your Kenyan phone number that works similarly to the Swedish Swish App. With M-Pesa, you can pay for anything and even transfer money, making it much more convenient than carrying cash.

### Accommodation

During my first week in Nairobi, I stayed in Qwetu Student Residence in Parklands. Other KTH students had lived there during their exchange studies in Nairobi, so it was through their travel stories that I got to know about Qwetu. The studio apartment I booked went for 31 500 KES/month, which

amounted to roughly 2550 kr during that time. Although the location and the price fit my budget very well, the stay at this place didn't last long due to complications with my room. I relocated to an AirBnB in the Westlands area for the rest of my stay.



*The view from my accommodation in Westlands, Nairobi.*

## **Project**

My project was about investigating and evaluating what indicators can be used and has the potential to assess circularity in Nairobi's municipal solid waste management system. It's related to SEI's Urban Circularity Assessment Project, which aims at assessing the circular economy model in urban areas. Since my field work was focused on the city of Nairobi, I managed to collaborate with SEI Africa (one of SEI's centres in Africa) for further assistance with my data collection.

The planned fieldwork involved conducting interviews with various stakeholders, visiting facilities of a services provider and a recycling company, observing the work on-site by different community-based organizations in the lower-class areas of Nairobi City, and developing a systems description. In total, the fieldwork took 8 weeks to complete, which was also the duration of my stay in Nairobi.



*How a typical day working on the project looked like.*

Overall, much time was spent to connect and interact with those who are involved and had the expertise in my research area. With the help of my contact person, I was able to meet some high-profiled stakeholders, like the Chief Executive Officer for the Environmental Sector and the Director of Environment at the Nairobi City County. Before departing, I presented the preliminary findings of my work to the staff at the SEI Africa's office.

### **The city and the country**

My project was based in Nairobi, so I spent most of my time there. I found the city to be hectic and vibrant. As the capital city of Kenya, it is a cultural melting pot with a diverse and blended population. The city is home to many international businesses and organizations, making it a popular destination for expats. Additionally, Nairobi has a lot to offer in terms of entertainment, and it was easy for me to get around as a solo traveller.

However, there are noticeable differences in development between various neighbourhoods, which highlights the contrast between the rich and poor. I observed the culture and society well enough to realize that it is important to take precautions such as being mindful of pickpockets in downtown areas and navigating the busy traffic.

Despite these challenges, the Kenyan people are incredibly friendly and sociable. It was easy to make friends and engage in casual conversations with anyone. I found them to be laid-back and relaxed, which required me to adjust to their pace. I often heard the Swahili phrase "polepole", meaning slowly, as a reminder to take things at a slower pace than what I am used to back home in Stockholm.

### **Leisure and social activities**

During my stay, I connected with a group of students from Sweden, Belgium, and the Netherlands. We bonded over the weekends by engaging in various activities and short excursions. We visited the National Museum, the Giraffe Center, Karura forest and several malls such as Sarit Center, The Village Market, and Two Rivers Mall. We also attended the Shoke Shoke music festival and went on a hike to the top of Mount Kipipiri, which was 3370m above sea level.



However, the highlight of my stay in Kenya was undoubtedly the trips we took to Mombasa and Diani Beach on the coastal side of the country and the Masai Mara Safari trip.





### **Sustainability**

Regarding my travel arrangements, I flew to Nairobi and back. While working in Nairobi, I found it most convenient to take cabs to get to my various destinations, which included my accommodation, office, and meeting points with my respondents. Not only was it an affordable and reliable option for me, but it also provided an added layer of safety, especially considering the city's hectic traffic. I primarily used Bolt and Uber, as they proved to be better alternatives to the local Matatus and Boda Bodas. Moreover, trying to maintain a low carbon footprint in Nairobi is not an easy task. Kenya is still in a developing state and Nairobi faces major challenges when it comes to managing the environment.

The project I worked on focused on the Sustainable Development Goals No. 11 (Sustainable cities and communities) and No. 12 (Responsible consumption and production). Nairobi's municipal solid waste is one of the city's major challenges and the management of the system does not have the capacity to keep up with the growing population, hence illegal dumping sites and landfills could be found in different lower-class neighbourhoods.



*Dumping site in Lucky Summer Ward, Nairobi.*

### **Other recommendations and observations**

The MFS program has not only allowed me the opportunity to connect it to my master thesis, but also given me the chance to network and gain contacts with people from different backgrounds in various fields. Furthermore, it's a great opportunity if you would like to explore the world while also connecting it to your studies. If you are interested in doing something similar, I highly recommend applying for the KTH Field Studies program.

I am so grateful that I took the chance. Traveling to another country alone for 2 months has taught me so much, I've gained new friends, and made some great memories. It was a highlighting moment of my time at KTH and I'm sure it will be so for you too.

If you have any questions about my field studies or Nairobi, feel free to reach out to me at [rahelmz@hotmail.com](mailto:rahelmz@hotmail.com).