



A Field study on using seaweed for biofertilizer production in Grenada

Before arrival

I applied for KTH field studies because I wanted to conduct my bachelor's thesis on a topic that would allow me to learn more about another country and to experience a different culture. My long-term goal is to work with social and ecological sustainability, and this field study provided a unique opportunity to deepen my understanding of these issues in a global context. We found the project in Grenada through KTH's exjobbsportal, and it aligned well with our educational background. I didn't have any specific expectations beforehand, but I was excited to learn new things and take on a completely different kind of experience.

Preparations for the field study included a KTH-organized workshop, literature studies for the project and vaccinations. I took the recommended vaccines against typhoid, cholera, dengue and hepatitis A and B. Overall, the preparations went seamlessly since no visa was required for going to Grenada, and English is spoken among locals, so no language courses were necessary. However, I took the course "*Intercultural Competence*" to develop tools for navigating and analysing new intercultural situations which I recommend!

Upon arrival

We arrived in Grenada in the middle of January and a few days before the start of the project to settle in. Upon arrival, we were welcomed by our contact person in Grenada who helped us get oriented and to find our accommodation. During our stay, he also introduced us to contacts and provided valuable insights into the local context, which made the transition smoother. Our field studies lasted for nine weeks, during which we conducted research, gathered data, and engaged with local stakeholders through interviews. We returned to Sweden by the end of March.

Financials

The cost of food in Grenada was generally more expensive than in Sweden due to the country's reliance on imported goods. To save money, we tried to buy local products and preparing our own meals whenever possible. It took some time to understand which items that were the cheapest to buy since it was a big difference compared to Sweden, but after a while we got used to it. Public transportation in Grenada were relatively cheap. We paid about 10-20 SEK for a one-way bus ride. The field study travel grant covered the flight tickets and vaccinations, and the additional costs were covered by my own savings.



Accommodation

Other KTH students had conducted their field studies in Grenada in previous years, which made it easier for us to find accommodation. We stayed at Seabreeze hotel, recommended by the local contact person. We were fortunate to get an affordable offer, and the location of the hotel was convenient since it was close to the beach, grocery stores, bus stations etc. Each room had a small kitchen, and there was also a larger shared kitchen located at the back of the hotel, where we often cooked our meals. During our final week, we moved into an apartment located just behind the hotel, which we shared with two other students from KTH. Altogether, our accommodation costs for the entire stay amounted to approximately 18 000 kr.



Project

The purpose of the project was to explore the use of the algae *Sargassum* as a component in biofertilizers. Our project was divided into two main parts: a chemical analysis and a market analysis. The goal of the market analysis was to gain a better understanding of Grenada's agricultural sector. People involved in the agricultural sector of Grenada as well as external actors interested in its future

were interviewed during our stay in the country. Our questions mainly focused on the local market and the sector's current practices, along with the potential for collaboration between public and private actors in turning the nuisance of algae blooms into a resource. As part of our field work, we collected *Sargassum* samples from different beaches along the east coast, one of the most affected areas by these algae inundations. We then brought the samples back to Sweden, where we carried out a chemical analysis to assess both the nutritional value and the presence of toxic trace elements. In addition, we conducted literature reviews.

Through this project in Grenada, I have learned so much about the challenges small island nations face when it comes to sustainable energy production and waste management. It has deepened my interest in working with renewable materials and sustainable technologies in the future. The experience has been both rewarding and enjoyable, and I am happy to have been a part of this initiative focused on turning *Sargassum* from a problem into a valuable resource. Additionally, it was encouraging and fun to hear that many of the people we interviewed wanted us to send them the final report.



Country

Grenada is a small island nation located in the eastern Caribbean, with a population of around 100 000. People were welcoming and kind and it was easy to feel at home. Historically, Grenada was colonized by Britain and gained independence in 1974. Moreover, Grenada is known as '*The Island of Spice*' due to its abundance of different spice plantations including nutmeg, cinnamon and cocoa.

One cultural difference from Sweden was how lively and loud the surroundings could be. It took me some time to get used to the constant sounds of traffic and music, usually Soca, which is very popular across the island. Grenada is an incredibly beautiful country, and I really enjoyed the many opportunities for outdoor adventures, especially hiking and exploring nature. Living in Grenada was overall a very pleasant experience, and I especially appreciated how open and friendly people were. For instance, during morning walks on the beach, everyone said hi and good morning to each other.

One small challenge was that the water supply could occasionally be turned off, so it was important to check that the water was running before stepping into the shower. Another funny detail was the frequent visits from small lizards in our room. They were harmless but tricky to chase out, so at times it felt like we had a little pet living with us!



Leisure and social activities

In our spare time, we made the most of the beautiful surroundings that Grenada has to offer. We often visited nearby beaches and explored various hiking trails around the island and did a snorkelling tour to the underwater sculptures. When it came to sports and activities, my project partner and I played tennis at a resort near to the beach, and I also attended a few yoga classes. We also did a lot of swimming and were fortunate to see sea turtles almost every morning. One of the most fun experiences was joining the weekly “hashes” every Saturday. Hashing is a group hike our run, usually about an hour long, through sometimes very challenging terrain, followed by music, food and a lively social atmosphere afterwards. Another highlight was the street food festival at True Blue Bay Boutique Resort every Wednesday, where we got a chance to try a variety of local dishes. One day, we took the ferry to Carriacou island during the local carnival.



Sustainability

To get to Grenada, we travelled by plane. During our field studies in the country, we were mostly able to walk or use the local minibuses to get around. However, it was sometimes challenging since many roads lacked sidewalks, and biking wasn't a safe option due to steep hills and intense traffic. In terms of food, we mainly prepared vegan and vegetarian meals based on what was in season and locally available, which was also the most affordable choice. This often included staples like plantains, salad, potatoes, lentils, rice etc. When possible, we bought locally grown produces from markets and roadside vendors. Moreover, Grenada currently lacks a recycling system and relies solely on landfills, meaning all waste had to be disposed of in a single bin. In summary, I found it a bit more challenging to live sustainably in Grenada compared to in Sweden.

In relation to the Sustainable Development Goals, our thesis project contributes by supporting the development of affordable and sustainable fertilizers. These can help reduce farmers' dependency on imports and enhance agricultural productivity. In addition, the development of bioenergy and biofertilizer solutions is important for mitigating the environmental and health impacts of *Sargassum* blooms in Grenada while supporting climate adaptation efforts, aligning with *SDG 13: Climate Action*.



Other recommendations and observations

I am grateful for the opportunity to conduct a field study in Grenada. I would highly recommend it to anyone interested in sustainability and how sustainable solutions can be implemented in a different cultural and environmental context during their studies. Doing a field study in a country so different from what you're used to offers valuable insights and experiences that go beyond what you can learn in a classroom. It's an amazing opportunity to gain knowledge, grow as a person, meet people from diverse backgrounds and contribute to something meaningful. The combination of research and new and fun cultural experiences made this field study both very special and unforgettable!

Specific observations and recommendations:

- Join the local "hashes" on Saturdays for a fun and social hiking experience held at different locations each week. You get to see beautiful parts of the island while meeting locals and other travelers.

- Explore nature – many beaches, waterfalls, and rainforest hikes are often easily accessible by the local buses and worth the trip. Don't miss BBC beach and Grand Anse, as well as seven sister's waterfalls and Mount Qua Qua!
- Attend local events like the Wednesday Street food festival at True Blue Bay Resort. It's a great way to try local dishes, and I especially recommend the nutmeg ice-cream, doubles and plantain salad :)

More pictures:

