

**Country for the project**

Fiji

**Degree programme**

CENMI, Energy and Environmental Engineering

## Potential for offshore wind power in Fiji, a site suitability analysis

### Before departure

Me and my friend Victor applied for the Minor Field Studies as we thought it would be a great experience for us as engineers and personally, and at the same time, gave us the opportunity to contribute something to Fiji. We chose Fiji after talking to two KTH students who did an MFS there last year and because we thought Fiji would be an interesting country to visit with many differences from Sweden. People in Fiji are, in general, very good at English so we didn't have to take any language courses. There were no obligatory vaccinations needed apart from the requirement of a full COVID vaccination certificate. It is possible to get a tourist visa for 4 months at arrival, however, our contact person in Fiji advised us to apply for a research permit since he thought we would need it. It took a lot of work to apply for the research permit, and in the end, we didn't manage to receive one in time and it turned out we didn't need it at all.

### Upon arrival

We arrived in Fiji at the end of March, but due to the uncertainties about whether we could start our studies without the research permit we didn't start our field study until a couple of weeks after arrival. Instead we used the first weeks to continue our literature study and to get to know Fiji. During this time we learned a lot about the culture, "island time" and how to get in contact with people we wanted to interview. The culture of emailing, as we know of here in Sweden, is not the same in Fiji. The field study, including interviewing ministries and different stakeholders as well as collecting data for GIS, went well and was completed in a couple of weeks.

### Financials

Fiji is a popular vacation destination for Australians and New Zealanders which has made the prices rise. It is not as expensive as Sweden though but not far away. The food in Fiji is often imported and is slightly cheaper than in Sweden. What could be bought in the grocery stores was quite different from Sweden and cheese for example was very expensive. I recommend buying local food at the local markets to save money. Accommodation in Fiji is slightly cheaper than in Sweden. However, we learned that the locals often increased the rent for tourists and accommodations were a lot cheaper for Fijians. We were really lucky though with our accommodation and the family we rented from offered us to borrow their car. The flight tickets to Fiji and around in the South Pacific were unfortunately really expensive so try to book as soon as possible for a better price.

### Accommodation

We stayed in a flat in Nadi which we shared with two other students from KTH who also did an MFS there. When splitting the cost between the four of us, it was slightly cheaper than our rents in Sweden. Our contact person offered us to find accommodation, but we managed to find ours by posting in a Facebook group for expats in Nadi. A very generous lady answered us and offered us to stay at her place. The flat was equipped with air conditioning, fully equipped kitchen, dishwasher and washing machine. Besides lending us their car, we could borrow their boat, and use their pool and summer house. The family's two sons stayed in the flat below us, and we spent a lot of time with them which was very fun and very helpful in order to learn more about Fiji.

## **Project**

Through dialog with both our contact person, Dr. Ramendra Prasard, who is the head of science at the University of Fiji, and our supervisor, Anders Malmquist, we came up with the idea of investigating the potential of offshore wind power in Fiji. The project was made up of two parts. The first part included making maps in GIS and defining the most suitable sites for offshore wind power in Fiji. The second part included making a simpler feasibility analysis of these sites. In order to collect relevant data and include local inputs, we conducted interviews with different stakeholders, such as different ministries and energy companies. During the interviews we noticed a lot of curiosity about our study and we will send the stakeholders our final version. Most of our work was done from home in our flat or at local cafés. We did go to the university sometimes to study and to discuss our project with our contact person, but not too often.

## **Country**

Fiji is an amazing country and sort of the hub of the island nations in the South Pacific. The people are super friendly and will always greet you with a smile. We didn't experience any criminality and we felt very safe, but as always, one should be careful, especially when going out at night. Unfortunately there are a lot of stray dogs which are troublesome sometimes as they can be quite territorial and aggressive. The culture is very interesting in Fiji as 40% of the population has roots from India. This is especially visible when it comes to food, as one can get both traditional Fijian food and Fiji-Indian food there. I didn't experience any culture shock, even though the culture was very different from Sweden. Some things take some time to get used to, for example "island time". Buses go now and then and things take time.

## **Leisure and social activities**

We actually had quite a lot of spare time, partly because we did a lot of work beforehand in Sweden, and partly because we were efficient when we collected the data and conducted our interviews. During our spare time we visited local restaurants, saw beautiful nature, swam in waterfalls, did roadtrips up in the mountains and around the island of Viti Levu, went to the capital Suva, took a diving certificate etc. There is a lot to do. We were really lucky as we could spend time with our host family's sons, who showed us around and let us meet their friends. When it comes to training, we went to the local sports club where they had a gym, tennis court, squash court and swimming pool. Fiji is very good at rugby and it's a big part of their culture. You could see people play everywhere and we also went to a big rugby event. Highly recommend doing that.

## **Sustainability**

Fiji is very dependent on oil, and both their electric grid and transportation system is based on fossil fuels. About 40-50% of the electricity in the grid comes from diesel generators. The public transport where we stayed in Nadi is not very good and often quite unreliable. We did take the local bus sometimes but we mostly got around by taxi or by car. Unfortunately, in Nadi, there were little to no recycling services. Our project aims to contribute with knowledge about the potential of offshore wind power in Fiji, which could help reduce their oil dependency and work towards achieving SDG nr 7 and NDC goals.

## **Other recommendations and observations**

Try to explore as much as possible of the local culture, go to restaurants, markets and talk to people. Also try to travel to the different islands in Fiji and other nations in the South Pacific. We truly enjoyed seeing the countryside of Fiji and going to Tonga. Lastly, don't assume people are uninterested just because they don't answer emails. Try to call them instead, that might work better.