

## Blog Post

This summer I was lucky enough to be part of the CMIL MURP program, a summer internship held at the San Diego State University Coastal and Marine Institute Laboratory in San Diego. My name is Matilde Cerutti, I am an international student from Italy, and I have been passionate about marine life for as long as I can remember. My interest sparked when I moved to San Diego in August 2020 and had my first swim in the ocean. Being surrounded by such beauty, harmony, and tranquility made me become even more passionate about learning who and what lives underwater, and eager to protect it at all costs.

This summer I, an upper division undergraduate student at SDSU, had the pleasure of working with my mentor Alyssa, one of two graduate students co-directors of the program, and Katherine, an early-stage community college student. I truly enjoyed working with them for many reasons, and I loved how our different backgrounds came together to acquire more knowledge. Katherine and I helped Alyssa with her own research, investigating carbon cycling in San Diego oceans and bays by measuring CO<sub>2</sub> flux. The research was divided into three parts: analyzing carbon flux in San Diego Bay, testing water quality in the Bay, and measuring CO<sub>2</sub> flux at Scripps Pier. For the duration of the program, we got to go on a boat survey around the Bay, walk on Scripps Pier at UCSD, meet at CMIL to discuss data and results, and do some work from home on our own.



Being part of this program truly meant a lot to me. By working with Alyssa and Katherine, I learned more about R studio and GIS (Geographic Information System), and how to use each to represent findings from our own research. Although I had some background in R from previous college courses, making plots using different variables that affect water quality, such as CDOM (Colored Dissolved Organic Matter) and PAR (Photosynthetically Active Radiation), helped me use my creativity and imagination while conducting scientific research. It was also fun to learn about making maps of the Bay using sonde points and different layers, such as military bases, conserved lands, and water quality sensitive areas. This summer I also learned about the equipment at CMIL and Scripps Pier. We used a Manta probe to test for water quality by connecting it to a data logger and lower it down into the water from the boat. The probe had many different sensors, including temperature, depth, salinity, pH, dissolved oxygen, conductivity, colored dissolved organic matter and photosynthetically active radiation. As a MURP intern, I also got the help I needed to improve my resume and CV, and received advice on how to apply to future jobs by interacting with professionals and other students in the field of marine biology.



I am thankful to everyone that made this program possible and would definitely recommend it to anyone interested! My plan after getting my B.S. degree is to start my journey at graduate school and keep learning about our oceans!