

Radioactive Contamination of Seafood, post Fukushima

My name is Bronwyn Delacruz. I'm a grade 12 student living in Grande Prairie, a small city in northern Alberta. With many lakes and forests essentially in my own backyard, my surroundings cultivated my interest in environmental science. I plan to study at the University of Winnipeg in the fall, and I am hoping to pursue a career in rural medicine.

Prior to living in Grande Prairie, I spent five years in Halifax, which cultivated my love for the ocean. My love for the outdoors, oceans, and wildlife is what spurred me on to do this project in 2014, when I began to understand the ways that human activity was negatively impacting the earth and everything on it; particularly the nuclear power industry.

When I read an article about how the Canadian Government stopped testing Pacific water and seafood after the four Fukushima Daiichi nuclear reactors started melting in 2011 down, I became concerned, and wanted to know more. Following some research, I learned that radiation leaking from the damaged reactors would hit the Canadian shores of British Columbia and be detectable in seafood and marine life by 2014, yet no more testing was being done.

I became motivated to see for myself, whether or not radioactively contaminated food was actually being sold in grocery stores, but was in awe at the price of testing- each sample you test is around three hundred dollars. To find a more affordable way of screening large amounts of seafood, my attention turned towards a Geiger counter, which is used to detect surface radioactivity. Using the established measure of 1450 clicks over a ten-minute period as the amount of radioactivity that is deemed "contaminated," I screened copious amounts of shell fish, fish, seaweed, and kelp from both Pacific and Atlantic sides of the ocean. I began to focus on seaweed and kelp species of marine life after the preliminary screening because they had significantly higher amounts of radioactivity, proving that they are good bio-concentrators.

I compared 6 samples of Pre-Fukushima Nori to Post-Fukushima Nori, and following statistical analysis, it was determined that there was a significant increase of radioactivity in post-Fukushima pacific seaweed compared to <2011 seaweed. Furthermore, all samples of pacific seafood that had a preliminary screening of radioactivity that exceeded 1450 clicks over a ten-minute period were determined to have manmade radioisotopes Cesium 137 and 134.

With no testing being done, most Canadians do not realize the impact that the damaged nuclear reactors have on the have on marine life and the health of our oceans, nor do they realize that seafood and other imports may be compromised. This project has opened my eyes to what is entering our grocery stores, and my next goal is to start a petition asking the Canadian Government to reconsider screening for radioactive contamination; both on the shores and our seafood.