A Profile of Heavy Metal Contamination in Lower Hudson Valley Tributaries

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Lead and cadmium have many adverse effects on the environment and human body, ranging from developmental hindrance to affecting vital organs within the human body. Lead and cadmium poisoning can come from soil and water. These two heavy metals can be found in rivers near industrial towns or cities A study done by UNICEF in July of 2020 estimated that 800 million children around the world are affected by lead poisoning. According to the University of Cambridge approximately 137 million people in over 70 countries are affected by heavy metals. The major heavy metals that affect people are lead, cadmium, arsenic and mercury but for our study we were only able to test lead and cadmium. A previous study done within the Saw Mill River found that heavy metal contamination was abnormal. In that study they tested the sediments for contamination. Based on this previous study conducted in 1984, we decided to conduct our own investigation into heavy metals in rivers in our own area. In the Saw Mill River, the average level of contamination of lead contamination was 141.2 ppb and for cadmium it was .21. For the Bronx River the lead contamination was 73.1 and cadmium was .06. To put this into perspective the EPA's standard for lead contamination in water is 15ppb and for cadmium it is .05ppm. These high levels of contamination are indicative of a larger problem and it is essential that we do all we can to help mitigate this issue.

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