Reducing Coral Bleaching Using Natural Resources and a Self-Sufficient Solar-Powered Filtration System (Year 4)

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This project demonstrates how carbon dioxide in the atmosphere is contributing to ocean acidification and coral bleaching. Through the course of a 4 year continuation on this project, this year a filtration system was created powered purely off of solar energy. This system filtered water through algae filled chambers enriched with calcium minerals that together extract carbon dioxide from the water, resulting in a solid calcium carbonate precipitate which can be removed from the water. The data supports the hypothesis that water filtered through the system can neutralize environmental factors contributing directly to coral bleaching. In attempts to preserve our reefs and oceanic enviroments, there is a need for neutralizing agents in our waters as well as awareness of harmful fossil fuel use, deforestation, and other human activities that are contributing to coral bleaching.

Awards Won: