Is It Possible to Create a Self-sufficient Solar Powered Filtration System to Reduce Coral Bleaching Using Natural Resources (Year 3)?

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Year 3 of this project tested how the filtration system can further be improved upon. A filtration system was created that runs off of only solar energy and ocean currents to filter the ocean water through algae. Algae has been proven to be more efficient and hardier then seaweed is. The tanks and filtration systems were set up the same as year 2 and all run at 5 GPH, except the variables were different types of algae. The species used were Chlorella Vurgaris, Chaetomorpha, and Sargassum algae. After testing, allowing the water to filter through each filtration at 5 GPH for multiple trials, results proved that each species of algae were even more effective then seaweed. The most efficient algae was the Chlorella Vurgaris. Again, out of time experimenting, none of the tanks produced water qualities that would cause coral to stress and die. Ultimately, the filtration system created that runs off solar energy and filters algae reduced and slowed down coral bleaching and lowers ocean acidification, supporting the hypothesis.

Awards Won: