

Sea Kelp Saving The World

Sea Kelp might just be the solution to global warming, but we are not paying enough attention to it. "The kelp forest up there, it's called bull Kelp. 90% of it's gone because the water is too warm, nutrient levels are too low, and the disruptions are getting worse, particularly with El Nino." That is Dr. Brian Von Herzen, CEO of the Climate Foundation addressing the big problem of seaweed loss.

"And once they reach a certain density, then they go from eating the apples on the seafloor to eating the apple trees and just buzz cutting the apple trees" Dr. Herzen addresses. Global warming is messing with the ecosystems too much and some terrible side effects are coming with that. When one thing fails in an ecosystem everything goes downhill with it. This is just one example of several ecosystems that are affected by global warming.

Dr Brian Von Herzen states "We need an extra degree of freedom. And I would propose that there are two of those. And the first is the ocean. There are a couple of ways of trying to address this problem, but the ocean is clearly one of them. And kelp forests today are just a little sliver of life, a few hundred meters wide on the edge of the Pacific Ocean." One of the solutions to food global warming, starvation, and healthy ecosystems is sea kelp. As mentioned earlier, not only the bull kelp on the coast of Marin, but kelp all over the world is slowly disappearing, due to warmer oceans. The Climate Foundation has solved several problems at once by growing sea kelp.

"And so we use marine solar energy, wave energy, and even wind energy to either bring the water up to the kelp, or alternatively we sink the kelp at night, so it soaks up the nutrients at night, and then we lift it up during the day with a deep cycling approach that it lets the seaweed at sunrise absorb sunlight and carbon dioxide in the top meter of the sea." He explains they have platforms that hold the seaweed and pump the colder water up during the day, while the plants get sunlight and nutrients. At night, the platforms go down into deeper water so the water is colder and they don't need to run the pumps anymore.

"Our main area right now is the western Pacific in the Philippines, because there's a quarter million seaweed farmers there already. It is really accepted, and literally it takes six weeks instead of twelve years to get a permit to grow an acre of seaweed off the coast in the Philippines." Even though a lot of companies and foundations are trying to help the earth, they will get rejected because of some rule, or it will take too long for them to get the permits for what they are doing. This is a big problem because, with global warming, it is going downhill fast, so time matters. It is great that the Philippines are doing this, but we can't have the project in one area. It needs to be widespread to have a large effect.

"No, we're actually educating folks in Australia about the Great Southern Reef and about restoring seaweeds and even trying to use similar approaches to try to save the Great Barrier Reef." Seaweed is not the only thing the Climate Foundation does. Dr. Herzen is going around different parts of the world and educating adults and children on seaweed loss and global

warming. This part is key, because some people know about climate change, but do not realize how urgent it is.

It's extremely important to stop seaweed loss and stop climate change. The Climate Foundation is doing an amazing job with new ideas, but it's not enough, we need everyone to step in and help. Growing kelp can help a lot because it brings back nature and fights global warming. But, everyone should know about it and all work together. Dr. Brian Von Herzen is educating people everywhere and showing how to help save the Earth. "Together we can stop global warming."-The Climate Foundation