SEAWEED SOLUTIONS

Combatting a Climate Crisis with Kelp

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SO YOU'RE TELLING ME THOSE DISGUSTING PILES OF SEAWEED ON THE BEACH CAN FIGHT CLIMATE CHANGE?!

Today, carbon dioxide levels in our atmosphere are the highest they have ever been. Tomorrow they will be even higher. These increased levels of carbon have direct impacts on climate change and accelerate global warming which are already causing intense environmental disturbances such as disastrous weather patterns, ocean acidification, and rising global temperatures. Normally, carbon levels in the atmosphere are kept stable by the millions of plants and trees that are found across the world. Unfortunately, deforestation for urban development has rapidly reduced the amount of trees and plants available to absorb this carbon thus causing spikes in CO2 levels. So how do we fight this worldwide issue of diminishing ecological balance?

Kelp aquaculture can be the solution we desperately need.

Largest CO2 Contributors

Tonnes/ person/ year

Electricity & Heat

6.64

Transport

5.3

Buildings

1.54

Manufacturing & Construction

1.34

International Flights

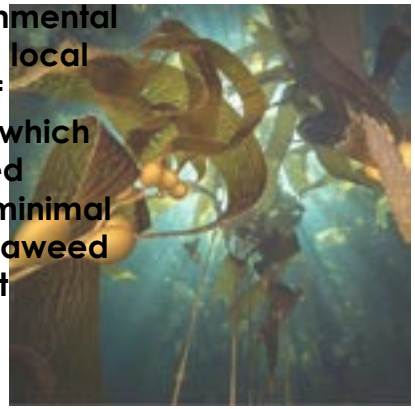
0.4

Industry

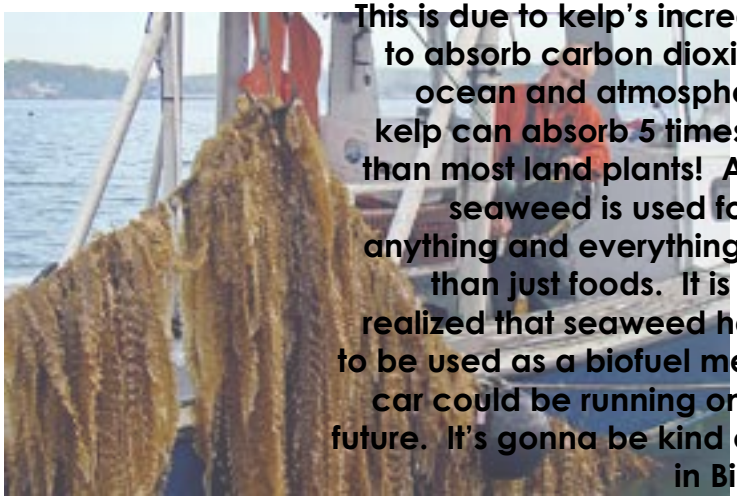
0.12

WHAT THE HELL IS KELP AQUACULTURE?!

Kelp aquaculture, seaweed farming, sushi roll gardening… Whatever you'd like to call it, the process of growing seaweed is beneficial for environmental health, global food security, and local economies. Essentially, seeds of seaweed are attached to ropes which are then dropped into designated areas and left to grow. There is minimal input and upkeep needed for seaweed farming making it extremely cost effective and energy efficient.



Not only does this new industry bring jobs and economic benefits (money woo!!) to coastal communities, but kelp aquaculture is a valuable asset in creating a powerful carbon sink. This is due to kelp's incredible ability to absorb carbon dioxide from the ocean and atmosphere. In fact, kelp can absorb 5 times more CO_2 than most land plants! Additionally, seaweed is used for just about anything and everything, way more than just foods. It is even being realized that seaweed has potential to be used as a biofuel meaning your car could be running on kelp in the future. It's gonna be kind of like living in Bikini Bottom.



KELP IS IN EVERYTHING!

Carrageenan

Comes from red algae (rhodophyta) and is used in:

- Dog food
- Chocolate
- Toothpaste
- Baby food

Alginate

Comes from brown algae (phaeophyta) and is used in:

- Ranch dressing
- Heartburn relief medicine
- Hand creams
- Lotions

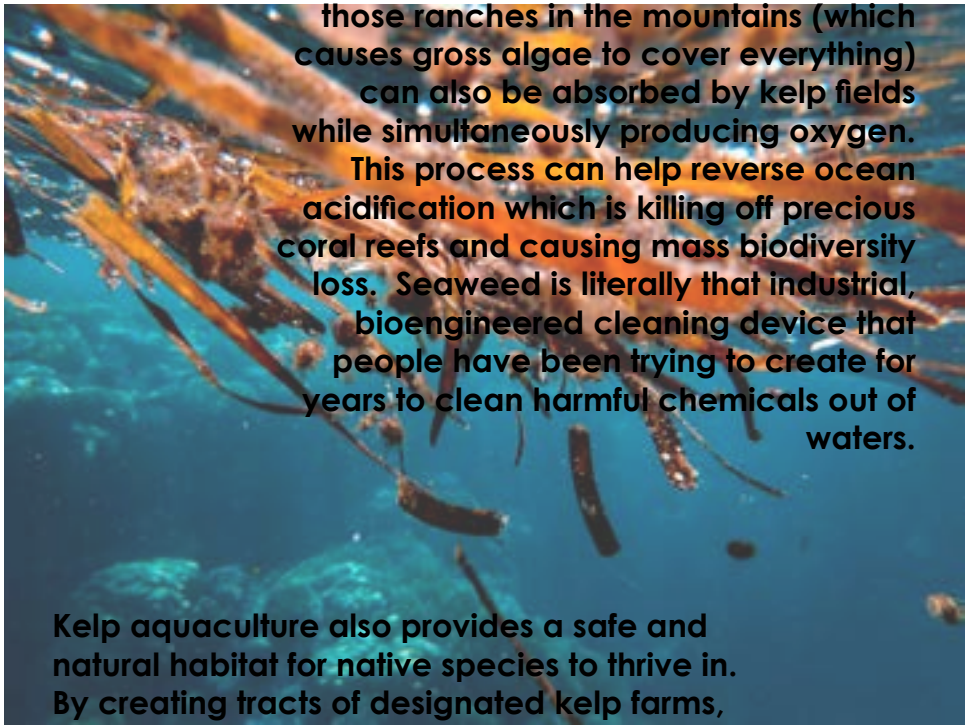
Agar

Comes from red algae (rhodophyta) and is used in:

- Packaged Danishes
- Ice Cream
- Smoothies

If you like eating seafood, or even if you prefer non-underwater foods instead, **you should probably be an advocate for** seaweed farming.

Sweet, so kelp can absorb all that CO_2 being released from the neighbor's damn kid lighting random stuff on fire in the driveway, so what? Besides kelp having the potential to absorb the majority of humankind's excessive greenhouse gas emissions, it provides other benefits to the environment as well. All the nitrogen and nutrients in fertilizer that wash down from those ranches in the mountains (which causes gross algae to cover everything) can also be absorbed by kelp fields while simultaneously producing oxygen. This process can help reverse ocean acidification which is killing off precious coral reefs and causing mass biodiversity loss. Seaweed is literally that industrial, bioengineered cleaning device that people have been trying to create for years to clean harmful chemicals out of waters.



Kelp aquaculture also provides a safe and natural habitat for native species to thrive in. By creating tracts of designated kelp farms, you are simultaneously creating a protected ecosystem for species such as crabs, sea stars, seals, sea otters, sea gulls, egrets, whales, and numerous other marine creatures. It's a natural all-you-can eat safe haven for various animals that harbors biodiversity growth.

Seaweed >>> Dollar Bills

Being a seaweed farmer, you don't have to worry about forgetting to put down fertilizer or accidentally stepping into a freshly made cow patty. Seaweed farming uses zero fertilizer, zero freshwater, and next to no energy. It also doesn't require the use and degradation of land, it's actually benefiting the environment it is in. The costs for necessary resources are minimal and there is virtually no upkeep necessary, just drop the seaweed down, come back to the farm to harvest, and sell it. Boom, sweet sweet money! Due to the versatility of seaweed and it's large range of uses, trying to find buyers for the product is not an issue. Anyone from a small local restaurant to an industrial manufacturing facility may use seaweed in their products. By creating jobs, providing resources for businesses, and supporting the economy of coastal communities, seaweed farming is more or less a symbiotic relationship for all parties involved. Plus, you get to send your friends photos of gorgeous ocean views from work while they sit in their office chair that they swear is going to send them to the chiropractor for a third time this month.

Saving the World... with Seaweed

So we know kelp aquaculture helps fight the impending doom of climate change, protects those cool ocean animals we all like to watch, and puts glorious dollars into local communities, but what if I told you it could help save the world? Maybe I am crazy, but listen to this. Kelp aquaculture can be a solution for the growing issue of global food scarcity. Because of kelp being a valuable resource for food production, it's low cost and low energy requirements, and its unique ability to not need land for growth, kelp is a perfect food source that can be utilized by both developed or developing countries to create food security. And seaweed isn't just a nutritious food either, it actually has health benefits as well.

So Why Isn't There Seaweed Farms In Your Community Yet?

So you're hooked on seaweed farming now, and you want to become an advocate. Maybe you even want to start your own seaweed farm off the coast. How do you help support the practice here in Santa Barbara?

It could be as simple as contacting your favorite local restaurant and asking if they've looked into kelp aquaculture for their product. You could also reach out to local conservation planning organizations about the possibility of implementing kelp farms in the area.

Or, you could reach out to help these companies in Santa Barbara who already have a head start in the industry:

PharmerSea
Owned & managed by Daniel & Antoinette Marquez
https://www.pharmersea.com/

Sunnyside Sea Farms
Privately owned marine botany company
https://seafarms.com/html/allabout.html

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Seaweed farming can provide the world with a brighter future, so why not hop on board?

To find more information on kelp aquaculture go to:

https://nolanfuss.wixsite.com/writing/blog

Or reach out to me on Twitter to talk more!

@SeaweedSolns

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