

Wow - We did not think we would be *personally* covering this !

In the last three months we have experienced the outfalls of *two* catastrophic climate disasters.



Days before Christmas, a Category 5 hurricane made a direct landing in the Philippines, literally washing away four of our five buildings, flooding our one vehicle and punching holes in our two boats. Electrical wires, cell phone towers and the internet were taken down. We had to wait many days to find out if all of our team members were okay (they were). Overnight, there were shortages. With no electricity, everyone suddenly needed cash as credit cards were valueless. Water was contaminated, Food was only available to those who had cash. Lines for ATMs and gasoline were 5-7 hours long. People returned from shelters to discover that their homes were just plain missing. It was horrific.

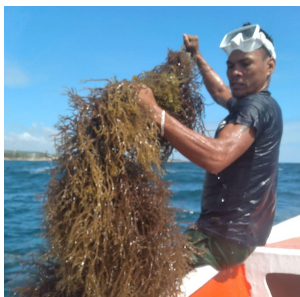
And in the meantime, from the Philippines to Australia, it rained for months. It rained and rained and rained until creeks turned into massive 50 meter rivers, rivers turned into lakes, and it all ended up flooding entire towns. Some people's homes and or businesses were submerged. The excessive rain created crop failures from the Philippines to Australia. And for us personally, we experienced food shortages as food deliveries were impossible with roads and towns underwater.



Once a catastrophe destroys your home, you are pushed to the bottom of the functionality ladder (Maslow's hierarchy of basic needs). And instead of putting time and effort into contacting your government to tell them to protect its citizens and ensure a stable planet, you are trying to find shelter, food and water. So for those of you who are still safe, let us please make our voices heard while we can. Consider joining groups that you think will promote a healthy climate - because our future depends on it.

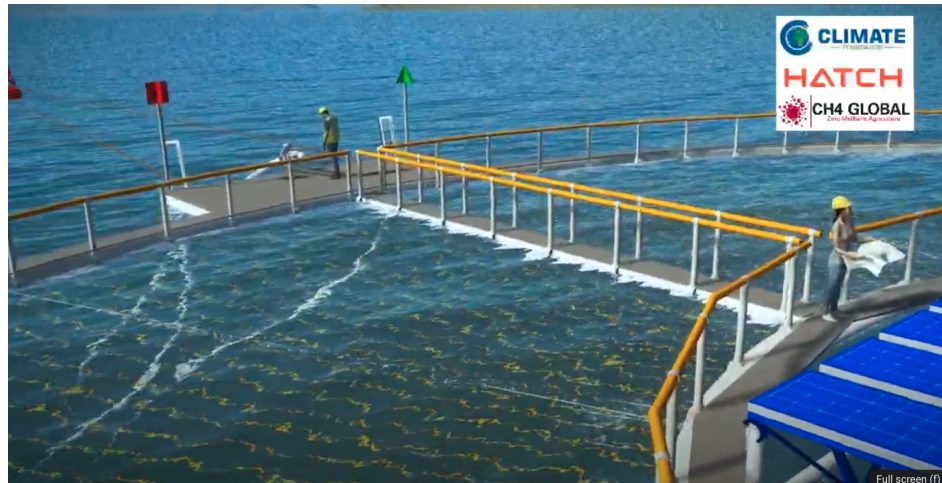
To a better tomorrow,  
Brian and Rebecca

## GOOD NEWS



**PROVEN!** Our greatest achievement to date happened on Dec 16, 2021 when we experienced a direct hit by a Category 5 typhoon and our work proved itself. Four of our five leased buildings were literally washed out to sea, but not only did our seaweed platform survive intact, most of the seaweed was still on it and continued to thrive. Our now-proven technology will provide a way forward for seaweed farmers to continue to make a living as climate change catastrophes increase in number and velocity.

**GREAT NEWS:** This year, we are scaling by a factor of 10! We are growing to a tenth of a hectare as visualized in this Computer drawing (right) of a solar-powered marine permaculture platform.



**NEW BOARD MEMBER:** We are so very happy to welcome a new member to our Board of Directors, Ray Schmidt, Ph.D. who is now an Emeritus Research Scholar and whose work is in Physical Oceanography. Ray received his B.Sc at Carnegie-Mellon University, Physics Ph.D. University of Rhode Island, Physical Oceanography J. S. Guggenheim Fellow, 1997-1998. Fellow, American Geophysical Union, 2012-2018 Harald Sverdrup Lecture, AGU Fall Meeting Van Allen Clark Sr. Chair for Excellence in Oceanography 2012-2017. As you can guess, Ray's many talents will help us in our direction forward.

**DOUBLE YOUR DONATION - Help Start the First Marine Permaculture Pilot in America!** A generous foundation pledged a grant to match donations for the first Marine Permaculture platform to launch in the Americas. Located right on the West Coast of the USA, the first site will be in the Santa Barbara region, in Southern California. The pilot will be where seaweed once grew in abundance - so much so that the kelp beds were nearly 1000-meters wide. So if you like oxygen (over half of our oxygen comes from marine plant life), [donate HERE](#) with the knowledge that every dollar you put in will be matched until we reach \$500,000.





## THE WORLD



**MONACO:** We were Invited by the **Prince of Monaco** to showcase our work at both Monaco Ocean Week in March 2022 and the [Blue Climate Summit](#) in May 2022 in the South Pacific.



**FRANCE:** Droughts and a limitation of fertilizer are threatening the wineries in France, so Volunteer and Global Change Maker Bart contacted us. He wanted to volunteer and give his education some meaning. Many months later - Bart now has his Masters and has started field trials with our seaweed biostimulants in France. He could just be the change that saves the wineries!

**USA: CALIFORNIA** Another wonderful Volunteer- we'll call him Global Change Maker Bob, decided that he wanted to have a Marine Permaculture in his home town of Santa Barbara. So armed with determination, tenacity and time, Bob has been gaining volunteers and funding. AND a foundation just pledged a foundational grant (see above) to get the plans going for a pilot project in Southern California in the Santa Barbara channel. If you would like to help get the first Marine Permaculture in the Americas, just let us know! We will send you his way.



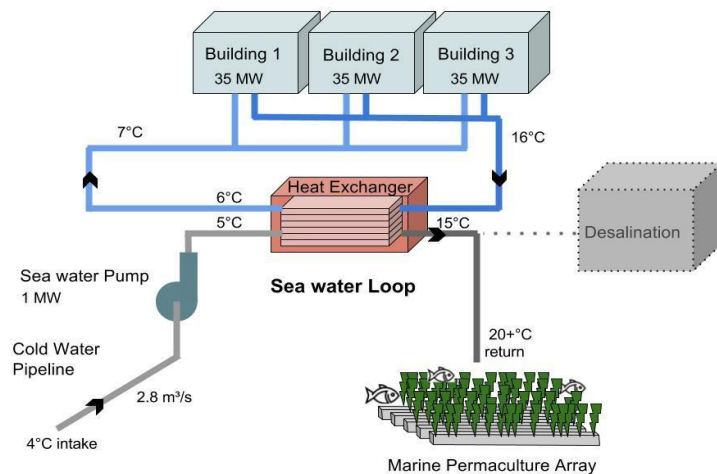
**USA: WASHINGTON DC:** Dr. Von Herzen is participating in the seaweed sinking working group with 50 scientists from Europe, the Americas and Australasia. So far, half a dozen workshops have been conducted with Ocean Visions, which is examining macroalgae's potential for carbon dioxide removal. This work is to advance a key research agenda - to develop methodologies to quantify blue carbon sequestration from macroalgae cultivation, and report results within 12 months.





**TAHITI: BLUE CLIMATE SUMMIT:** It was competitive, but we were selected as a key Blue Climate project for French Polynesia! The purpose of the Summit is to accelerate ocean-related solutions to climate change, launch major announcements, galvanize task forces, present impact investment opportunities, and provide an international forum for Pacific Islanders to spearhead action on ocean and climate issues. The Summit will bring together scientists, environmental activists, business leaders, policy makers, financial experts, community leaders, influencers, and youth leaders to accelerate solutions to some of the greatest challenges facing humankind. Sponsors include the Government of French Polynesia and other public and private institutions.

In addition, the Blue Climate Summit selected the Climate Foundation to submit a Marine Permaculture project, with a focus on utilizing the seawater air conditioning system recently commissioned in 2021 for the hospital in Tahiti. The return flow from the air conditioning system would irrigate an offshore seaweed forest under this project plan. A schematic right) shows how the cold ocean water provides cooling for district cooling using a fresh water loop, which runs through buildings, travels through a heat exchanger and the leftover water irrigates an array of seaweed (which just might end up being a cool tourist destination).



## AUSTRALIA

**UPCOMING:** We are engaged in preliminary and advanced discussions for approximately half a dozen potential Marine Permaculture projects within Australia, including possible projects to

retrofit offshore oil and gas platforms.

And we are furthering designs in collaboration with multiple pro bono Australian engineering firms for the 1000m<sup>2</sup> Marine Permaculture platform which is to be deployed in the Philippines this year. For example,

**HATCH**

**Hatch** is designing a one hundred square meter platform for Queensland and the Great Barrier Reef. This work will help us scale for our future kelp growth, and allow increasingly larger seaweed forest arrays to be distributed to locations around the world.

**WSP**

**WSP** is a marine oriented engineering firm who also wants to help us help the planet. This fabulous firm is helping us with the detailed design and simulation of the 1000-square meter platform and its prototype implementation in the Philippines this year.



**This year the Blue Economy Cooperative Research Center** -voted the Climate Foundation in as a full member of the Blue Economy CRC. In addition, we are the founding corps members of the

Marine Bioproducts Cooperative Research Center. Our joining these groups will advance the case of using macroalgae for carbon dioxide removal.



180Degrees  
CONSULTING  
UQ

**180:** Remember the great team of student elves from the last newsletter? Well, 180 Degrees Consulting has once again offered to help with a few key areas of our organization. Given how insightful they were last time, we are looking forward to their input!

## PHILIPPINES

“.. Just when you think everythings running great - a hurricane shows up in your backyard... “



In case you missed it, eight days before Christmas, there was a direct hit by a category 5 hurricane in the Philippines. But did that take down our team? Nope. They showed up the next day and began cleaning up the worksite.

AND when we confirmed that our Marine Permaculture array survived and the seaweed was still thriving, we were able to coordinate with our partners (Coast4-C and other communities) to transfer hundreds of kilos of seaweed seedlings so that they could replant their seaweed farms.



AND we've been testing multiple architectures and field deployments using deepwater irrigation on our platforms in the Central Philippines.

AND we've been running several preliminary tests to measure and quantify the carbon flux from our platforms.

AND thanks to our donors, we've secured sufficient funding to scale our Marine Permaculture array tenfold in area, which results in a planned deployment of a 1000m<sup>2</sup> platform this year (2022)

AND if that wasn't enough, we've already begun sourcing materials and labor to construct the 1000m<sup>2</sup> platform!







AND the locals are having a tough time. The ocean is becoming too warm to sustain seaweed growth, the area is overfished, and a hurricane destroyed their homes and livelihoods. So we are working to ship 500 kilos (1,102 lbs) of seaweed seedlings to neighboring communities to restart their seaweed farms. If you would like to help us help families get a break, please donate [HERE](#)

AND one of our team members took it upon himself to team up with a former CF worker in England to help a local family by literally putting a roof back on their house. The tin sheeting was transported by tri-cycle and boat. The success can be measured in dry nights and big



smiles!

We sure do have a great team!

## OUTREACH

### WEBINARS



#### Ocean Regeneration Q&A with Dr. Brian Von Herzen | R-FUTURE 2022 & Matt Powers

Covering all sorts of aquatic permaculture topics including Azolla. Find it [HERE](#)

### Australian Academy of Technology and Engineering

Hosted “Seaweed Farming and floating structures in combating climate change”. You can watch it [HERE](#):



### ARTICLES

#### HOW THE FIRST LADY OF SEAWEED CHANGED SCIENCE

Isabella Abbott, the first native Hawaiian woman to earn a doctorate in science, rewrote the book on her beloved limu. Link [HERE](#)

#### GHOST NETS: TACKLING A SILENT KILLER OF THE SEAS

How lost floating nets are killing the ocean - and a possible solution. Link [HERE](#)

Watch for an upcoming publication by David Holmgren (considered to be the father of permaculture) and Scott spellius who is a PhD candidate at the University of Queensland. David, Scott and the Climate Foundation are combining forces to create a peer-reviewed publication on a motivating force applying the dozen permaculture design principles to marine permaculture.

## VOLUNTEERS - GLOBAL CHANGE MAKERS

### HELP!

- Do you know Google Analytics or HootSuite Analytics? And /or Google Tag Manager? Google Ads? We could use your help. Please contact us!



- We are looking for a donation of, or to learn about a remote underwater camera that we could leave underwater for weeks while it automatically takes snapshots of seaweed on the seafloor. In addition, it would be great if it had a quick release, enabling later recovery. Do you know of a good model that could do this? Please let us know at [info@ClimateFoundation.org](mailto:info@ClimateFoundation.org)

- **SOCIAL MEDIA**

Is your talent in creating beauty? Would creating the graphics for social media posts be of interest to you?

- Or how about words? Would creating content for posts be fun for you? Wanna help us help the planet? If so, please sign up [HERE](#).



**EASY** - Did you know that an easy way to help us is to post and repost our social media? We are on [Twitter](#), [Facebook](#), [Instagram](#), and [Linkedin](#). You can find us by our name, "Climate Foundation" and look for our logo. We'd love to see you there!

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