

The background of the cover is a close-up, underwater photograph of a kelp forest. Large, bright yellow-green kelp leaves dominate the frame, their textured surfaces and veins catching the light. The water is a clear, pale blue, with sunlight filtering down from above, creating bright highlights and deep shadows in the fronds.

ANNUAL REPORT 2021



KELP FOREST
FOUNDATION



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LETTER FROM THE BOARD

Foundational years always brim with the excitement of the idea and of the possibilities that lay ahead. 2021 was such a year. With the launch of the Kelp Forest Foundation, we started exploring the answers to an important question: "How do we quantify the ecosystem services of (cultivated) giant kelp?" While it is generally accepted that kelp is a carbon sink and an ecosystem engineer and a biodiversity booster, we couldn't find where these claims were undeniably quantified in scientific research for cultivated kelp forests.

And this is why the Kelp Forest Foundation was established. By housing all the research within a foundation, we ensure transparency and openness. In this way the knowledge, facts and data we are searching for can be used to help progress the development of the seaweed sector as a whole.

Many start-ups and small scale cultivators don't have the means, nor the resources to put against understanding the deeper questions around giant kelp. But the knowledge is essential for the industry to scale and grow to its full potential.

Our first year has been one of setting the cadence and ensuring we can keep the same pace of development and learning. We set the bar high with our achievements: we've already sponsored 3 master's students to conduct baseline studies, set up research projects with universities across the globe, and raised a very respectable sum of money to fund all of the work we're doing.

We are already starting to address the scientific gaps, to quantify the claims and to ensure the knowledge is available to everyone-- and we're doing this all while being governed by our principles of speed, action and results.

Given the results so far, there's no doubt we are onto a good thing.

But this is just the beginning, we need to keep moving at pace and be ruthlessly focused on results. This way will we achieve our goals of a healthy planet with thriving ecosystems.

Yours sincerely,

SAMANTHA DEANE
Managing Director



CAROLINE SLOOTWEG
Chair of the board



WHO WE ARE

MANAGEMENT



SAMANTHA DEANE

Managing Director

BOARD OF DIRECTORS



CAROLINE
SLOOTWEG

Board Chair



DANIEL HOOFT

Board Member



TIM FLANNERY

Chief Scientist,
Board Member

OUR MISSION

We exist to independently and transparently establish the ecosystem value of cultivated kelp forests as a powerful nature-based solution to remediate ocean health, mitigate climate change, increase marine biodiversity, and create sustainable products.



Image: © Kelp Blue

Kelp is drastically understudied given the benefits it can deliver. Kelp Forest Foundation was set up to address the gaps in science and knowledge around kelp forests' ecosystem services, and to ensure that this knowledge is publicly available to companies, governments, regulators, not-for-profits, academics, and other stakeholders. We want to unlock the potential of giant kelp by accelerating global awareness, preserving kelp ecosystems by collecting and protecting spores, and building the next generation of ocean custodians. We work with research institutions from around the world, focusing our research projects on the many and varied services of giant kelp.

WHY KELP?

REWILDLING THE OCEANS WITH GIANT KELP

The ocean is a vital life support for our planet. Covering over 70% of the earth, it produces at least 50% of the oxygen on the planet, and it absorbs 25-30% of human-caused carbon dioxide (CO₂) emissions - making it the world's largest carbon sink. We can harness the ocean's biological power to help us in the fight against climate change. Kelp cultivation is one of these ways.

The health of the oceans is currently threatened by the excess of greenhouse gases disrupting our climate. Kelp, a type of brown seaweed that grows in forests, is very efficient in absorbing the excess CO₂ in the atmosphere. As it is one of the fastest growing organisms on the planet, with growth rates of up to 2 ft/50cm a day, it can capture 5-20 times more carbon compared to land-based plants. Through the process of photosynthesis, kelp stores carbon in its biomass: one tonne of kelp can store approximately one tonne of CO₂-equivalent. Some of the kelp in the forests will die off and be exported deep into the ocean, allowing it to remove carbon dioxide from the atmosphere for long periods of time.

ECOSYSTEM SERVICES

Giant kelp provides many other positive ecological benefits (ecosystem services). It provides habitat for marine species and support food chains both in water and on land. Kelp oxygenates and absorbs excess nutrients from surrounding waters while at the same time decreasing harmful ocean acidification caused by manmade carbon emissions as it takes up excess CO₂ during its growth.

Cultivating kelp forests can be done in areas not in competition with terrestrial space and processed kelp can be a source for many products: food for humans and animals, fertilizer, medicine, bioplastics, and more. Creating kelp forests and producing products made wholly or partially from kelp can provide long-term employment for coastal communities.

Currently, kelp forests are one of the most important and yet one of the least widely understood ecosystems. Advancing knowledge of kelp farming and its impact will help us unlock its potential to combat climate change.



FOCUS AREAS

1. ACADEMIC RESEARCH

Kelp Forest Foundation's main focus area is filling the gaps in the science to prove and quantify the ecosystem services of giant kelp afforestation. Our research programs fund students from Namibian and international universities to complete relevant MSc and PhDs. We engage with international research institutions to co-supervise the students and help increase knowledge transfer.

CARBON SEQUESTRATION AND GEOCHEMISTRY

Giant kelp has the potential to sequester carbon from the atmosphere into the deep sea. Our research program aims to quantify kelp's carbon sequestration potential by using models, biogeochemistry research, etc. This research will provide scientific underpinning to support a carbon credit methodology.

BIODIVERSITY

We will further the understanding of the role of cultivated giant kelp forests in marine environments by creating baseline studies to later understand their impact on existing ecosystems and their role as marine habitats.

IMPACT OF KELP-BASED PRODUCTS

In order to better illustrate the positive impact, we will quantify the greenhouse gas emissions avoided as a result of the use products made out of sustainably cultivated giant kelp.

2. BLUE CARBON METHODOLOGY

The research undertaken by KFF will add to the scientific foundation that supports the development of a new voluntary protocol for carbon sequestration by cultivated giant kelp. This will allow future kelp farmers to monetise the positive carbon impact of their activities.

3. PUBLIC AWARENESS

Increasing public awareness of the multiple ecosystem services of kelp forests. KFF will do this by participating in webinars and conferences, films, documentaries as well as ocean awareness and education (youth) programs

4. MACROCYSTIS SEEDBANK

Setting up *Macrocystis pyrifera* seedbanks by collecting genetic material from wild giant kelp forests around the world, then storing it in the right conditions within seed banks. The goal is to preserve genetic diversity of giant kelp for the future

OUR ACTIVITIES RELATED TO THESE FOCUS AREAS STARTED IN Q3 2021,
ONCE WE HAD FUNDING IN PLACE.

2021 HIGHLIGHTS

The Kelp Forest Foundation was founded in 2021. In our first year, our focus was squarely on establishing collaborations and research projects together with Namibian and other international universities to start quantifying the ecosystem services and carbon sequestration potential of giant kelp (*Macrocystis pyrifera*). In our first 12 months, we have funded 3 master's students and initiated research projects in collaboration with the University of Namibia, University of Cambridge, University of Portsmouth and the University of Sussex.

In 3Q 2021 we started generating awareness around our work and acquired knowledge through social media, by attending conferences, and developing collaborations with organisations that experiment with kelp-based products. We also took our first steps in establishing the *Macrocystis* seedbank by identifying Hortimare as a seed bank partner.



5 RESEARCH PROJECTS INITIATED

Collaborations across universities, and research institutions

3 MASTER'S STUDENTS FUNDED

Three Namibian students carrying academic research (carbon sequestration and biodiversity baselines)



Public Awareness

- The iconic Garden Egg chair designed by Felix Ghyczy - 3D printed from kelp and the fabric was dyed using ink made from seaweed pigments
- Collaborated to create sustainable fabric dyes
- Samantha represented Kelp Forest Foundation at the TED Climate Countdown conference, the Summit 4 Oceans, and spoke on a podcast about kelp forests

The background image shows a vibrant underwater scene of a kelp forest. The kelp plants have long, thin, dark brown fronds that curve and twist in various directions against a bright, translucent blue background.

ACHIEVEMENTS 2021

ACADEMIC RESEARCH

ACHIEVEMENTS - ACADEMIC RESEARCH

RESEARCH PROJECT 1

KELP CARBON DIOXIDE REMOVAL PATHWAY MODELLING SYSTEM

Sponsored position:	Postdoc
Student name:	To be selected
Timeline:	January 2022 - December 2023 (2 years)
Supervisor:	Dr John R. Taylor (University of Cambridge)
Donor:	Gordon and Betty Moore Foundation
Budget:	USD 292,000 Committed: USD 292,000
Sought:	Fully funded (paid directly to Cambridge University)

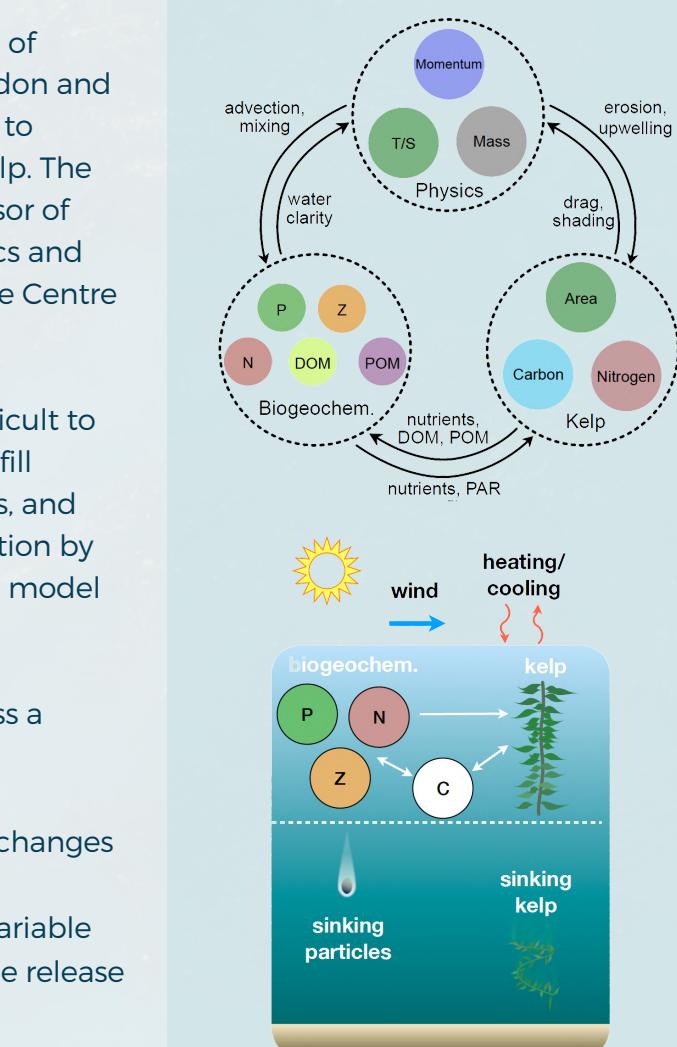
The Kelp Forest Foundation secured a generous donation of USD292,000 from the Special Project Funding of the Gordon and Betty Moore Foundation to create an open-source model to assess the carbon sequestration potential of cultivated kelp. The model development will be led by Dr. John Taylor, Professor of Oceanography in the Department of Applied Mathematics and Theoretical Physics at the University of Cambridge and the Centre for Climate Repair at Cambridge.

Biogeochemical cycles in the ocean are complex and difficult to fully constrain with measurements alone. This model will fill missing data and unmeasurable quantities in these cycles, and help to quantify the rate of carbon storage and sequestration by kelp and the interactions with the local environment. The model will consist of three coupled components:

- 1 A hydrodynamic model will capture ocean physics across a range of scales and transport/mixing of nutrients and biogeochemical tracers.
- 2 A multi-component biogeochemical model, capturing changes to primary productivity and the biological carbon pump.
- 3 A kelp growth model will simulate kelp growth under variable environmental conditions and will be used to estimate the release of Particulate/Dissolved Organic Carbon.



DR. JOHN TAYLOR



RESEARCH PROJECT 2

CARBON SEQUESTRATION POTENTIAL OF KELP FARMS

Sponsored position:	MSc in Chemistry
Student name:	Protasius Mutjida
Timeline:	June 2021 - July 2023 (2 years)
Supervisor:	Dr. Daniel Likius (UNAM)
Co-supervisor:	Dr. Ateeq Rahman (UNAM)
Int. co-supervisor:	Alexandra Turchyn (University of Cambridge)
Donor:	COOn Foundation
Budget:	EUR 45,000 Committed: EUR 45,000
Sought:	Fully funded

Thanks to a donation from the COOn Foundation, we were able to sponsor our first Namibian student to undertake an MSc in Chemistry. Protasius Mutjida is registered at the University of Namibia (UNAM) and is supervised by Dr. Daniel Likius and Dr. Ateeq Rahman of UNAM and co-supervised by Dr. Alexandra Turchyn of Cambridge University. Protasius will undertake a baseline study of the water geochemistry in and around the pilot farm of seaweed innovator Kelp Blue in offshore Luderitz, Namibia.

This baseline will help us independently and transparently quantify the geochemistry impact (including carbon sequestration and nutrient uptake) of cultivated kelp forests. He will also be working closely with Dr Taylor and his team to supply the data necessary for the modelling system.



PROTASIUS MUTJIDA

RESEARCH PROJECT 3

MAPPING AND MONITORING MARINE AND COASTAL ALGAE ALONG THE SHORE AND OFFSHORE ENVIRONMENT OF LUDERITZ WITHIN THE NAMIBIAN EEZ

Sponsored position:	MSc in Fisheries and Aquatic Studies
Student name:	Angelique Dodds
Timeline:	January 2022 - December 2023 (2 years)
Supervisor:	Dr. Samuel K. Mafwila (UNAM)
Co-supervisor:	Ms. Cathleen Deelie (UNAM)
Int. co-supervisor	Dr. Ian Hendy (University of Portsmouth)
Donor:	COmON Foundation
Budget:	EUR 45,000 Committed: EUR 45,000
Sought:	Fully funded

Thanks also to the generous donation from the COmOn Foundation we were able to sponsor our second Namibian student to undertake an MSc in Fisheries and Aquatic Studies. Angelique Dodds is registered at the University of Namibia (UNAM) and will be supervised by Dr. Samuel Mafwila and Ms. Cathleen Deelie of UNAM and co-supervised by Dr. Ian Hendy of University of Portsmouth.

Angelique Dodds was selected amongst 25 candidates who applied to our post offering an MSc scholarship to create a biodiversity baseline study of the area where Kelp Blue's pilot is located. With the help of environmental DNA (eDNA) kits provided by NatureMetrics as well as visual analytical tools, Angelique will write a paper mapping the existing algae of the pilot area, control sites and adjacent coastal areas to be able to properly measure the impact of kelp farming on the existing algal ecosystem, including on current local kelp beds and phytoplankton.



ANGELIQUE DODDS

RESEARCH PROJECT 4

MAPPING AND MONITORING MARINE AND COASTAL FAUNA ALONG THE THE SHORE AND OFFSHORE ENVIRONMENT OF LUDERITZ WITHIN THE NAMIBIAN EEZ

Sponsored position: MSc in Fisheries and Aquatic Studies

Student name: Elizabeth Petrus

Timeline: January 2022 - December 2023 (2 years)

Supervisor: Dr. Clinton Hay (UNAM)

Co-supervisor: Mr. Lineekela Kandjengo (UNAM)

Int. co-supervisor Dr Mika Peck (University of Sussex)

Donor: COMON Foundation

Budget: EUR 45,000 | Committed: EUR 45,000

Sought: Fully funded



ELIZABETH PETRUS

The donation from the COMOn Foundation allowed us also to sponsor our third Namibian student to undertake an MSc in Fisheries and Aquatic Studies. Elizabeth Petrus will be supervised by Dr. Clinton Hay and Mr. Lineekela Kandjengo of UNAM and co-supervised by Dr. Mika Peck of University of Sussex.

Elizabeth was also selected amongst the 25 candidates who applied to our post offering an MSc scholarship to create a biodiversity baseline study of the area where Kelp Blue's pilot is located, focusing on fauna. Elizabeth will be using visual, acoustic and eDNA measurements to create a comprehensive picture of the existing marine animals within and around the Kelp Blue farm pilot area and control sites.

RESEARCH PROJECT 5

MEASURING BIODIVERSITY IMPACT USING eDNA



eDNA sampling

Student name:	Angelique Dodds and Elizabeth Petrus
Timeline:	January 2022 - December 2023 (2 years)
Donor:	Safe Seaweed Coalition
Budget:	EUR 50,000 Committed: EUR 50,000
Sought:	Fully funded

Environmental DNA (eDNA) is a cutting-edge technology that has changed the way scientists monitor biodiversity. It enables scientists to study entire ecosystems and to monitor elusive species that would otherwise evade detection. DNA sequencing is used to collect data quickly and easily, simply by scanning samples of soil or water. As organisms move through their environment they leave behind genetic fingerprints in the form of fur, skin, scales, pollen and secretions. Small samples can contain the DNA of the species and give a detailed snapshot of an ecosystem quickly, efficiently and cost effectively.

Both Angelique and Elizabeth will be using eDNA as one of their monitoring techniques. The students will be working closely with NatureMetrics, a British award-winning technology provider of monitoring data. Thanks to a grant from the Safe Seaweed Coalition, the Kelp Forest Foundation will be purchasing NatureMetrics eDNA kits to collect water and sediment samples in Namibia to be analysed in NatureMetrics state-of-the art labs.

This will not only help us improve Namibian species records and understand what species are living in the Southern area of the Benguela Current, but also to measure the impact of cultivated kelp forests over space and time. Creating a comprehensive biodiversity baseline study is key in monitoring and quantifying the impact that cultivated kelp forest have in the existing ecosystem, and giving scientific backing to the ecosystem services of giant kelp.

The large datasets that we will generate will be openly shared and will aid other scientists understand species distributions at a global scale. This will provide independent and transparent evidence of the biological impact of kelp forests on the surrounding oceans biodiversity and help underpin the responsible expansion of giant kelp cultivation in other areas of the globe.



ACHIEVEMENTS 2021

**CARBON CREDIT
METHODOLOGY**

DEVELOPING CARBON CREDIT METHODOLOGY FOR GIANT KELP

Currently, there is no verified carbon credit methodology available for kelp or macroalgae ecosystems. The Kelp Forest Foundation is setting up the first carbon credit methodology for off-shore cultivated seaweed to support the blue carbon economy.

The Kelp Forest Foundation is working closely with Kelp Blue (a commercial company pioneering the offshore cultivation of giant kelp in Namibia) to build out the evidence base to prove that kelp afforestation is a viable option in the search of natural carbon sinks. Together with scientists and engineers, field tests are undertaken to provide more information about the scale, durability, and environmental risks of kelp cultivation at scale. This research will deliver the information needed to produce reliable standards and determine best practices.

Filling in these knowledge gaps will be essential to setting up reliable carbon accounting methods that eventually allow companies to buy and trade kelp carbon credits. The science today is too premature to start selling carbon credits from kelp without further research. We also need to create an independently verified methodology.

In 2021, The Kelp Forest Foundation has set in motion the wheels to make kelp forests eligible for carbon credits. KFF has engaged Carbonomics, a leading developer of carbon offset projects, to write and present a concept to Gold Standard, a rigorous climate standard which ensures that carbon credits are real and verifiable, and that the projects benefit local ecosystems and populations. The draft concept note will be presented in Q2 2022. If approved, the concept note will be turned into a methodology for carbon credits which sets the steps needed to calculate the number of credits to be earned.



Gold Standard®
for the Global Goals



ACHIEVEMENTS 2021

PUBLIC AWARENESS

PUBLIC AWARENESS

2021 marked a year where the Kelp Forest Foundation contributed knowledge and awareness on the many benefits of giant kelp. Samantha, our managing director, attended webinars, conferences and spoke on podcasts to support the sharing of data and information publicly. In this year, KFF also collaborated with innovative companies that have used kelp as a replacement for materials such as plastics or fabric dyes, to illustrate the various potential uses of kelp.

WEBINARS AND CONFERENCES

SUMMIT4OCEANS

Sevilla Blue Economy Virtual Event



SUMMIT4OCEANS
SEVILLA blue economy virtual event

Samantha represented KFF at the Summit 4 Oceans held virtually on 18-19 May 2021. She participated in a round table discussing the path to increase restoration of ecosystems in the oceans. She shared the panel with Angel Borja and Sarai Pouso of AZTI, and Jaime Palop of EMASESA. The session was moderated by Ramon Alvarez, a journalist of La Vanguardia.

PALOOLA PODCAST

Kelp, Forests Underwater



In August 2021, Samantha recorded a podcast for interviewer Paula de la Cruz called Kelp, Forests Underwater. Samantha spoke about how creating kelp forests at scale could have many beneficial effects on ocean planetary health as well as on coastal livelihoods. The podcast also featured musicians Ronan Killen and Johnny Blundell, producers of My Amphibious Soul as well as underwater photographer Amos Nachoum.

TED COUNTDOWN CONFERENCE



Samantha was asked to attend the first in-person TED climate conference in Edinburgh on October 12-15th, 2021. The aim of the conference was to bring together 1,000 leaders to share imaginative and scalable solutions needed to turn the tide on climate change, ahead of COP26 in Glasgow.



POTENTIAL USES OF KELP

BIOPLASTICS/3D PRINTING

THE GARDEN EGG CHAIR



Top: Peter Ghyczy with his "Garden Egg Chair" made of polyurethane.

Bottom: Test run: Robot print, detail images of a 40x40cm cube 3D printed on a large scale printer using cultivated giant kelp pulp as an input.

Kelp Forest Foundation worked together with GHYCSY and Studio Klarenbeek & Dros to recreate the Garden Egg Chair designed by Peter Ghyczy. Ghyczy was the chief designer for the polyurethane factory 'Elastogran GmbH' in Lemförde (Germany). One of his very first designs there was the so called 'Garden Egg' chair in 1967/8 in polyurethane.

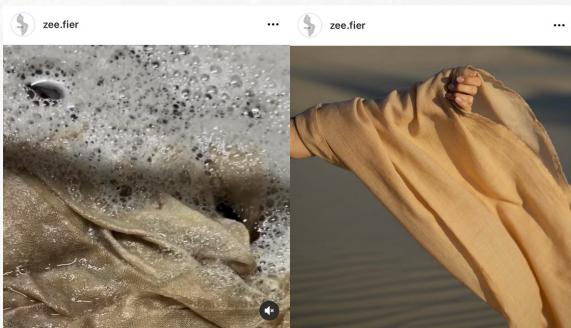


The Garden Egg Chair printed with cultivated kelp

The original design, which is part of the V&A collection, incorporated features typical of the period: a space age look, UFO-like form, bright coloured plastic lacquer, portability and the informal lounging quality of the low seat. The idea of the latest creation was to showcase a new type of sustainable input - cultivated seaweed - which can replace the likes of polyurethane and can be used in new technologies such as 3D printing.

SUSTAINABLE FABRIC DYE

DUTCH DESIGN WEEK 2021



259 weergaven

zee.fier There are thousands of types of seaweed and they are categorized into three types: red, brown and green seaweed. Each species has its own color qualities and therefore it's possible to create a wide color palette ranging from green, yellow, brown and orange, to pink and purple.

62 vind-ik-leuks
zee.fier This scarf is dyed with a waste stream, or, as we prefer to call it, by-product, of Giant Kelp. It gives a lovely soft orange.
#seaweeddye #naturaldye #sustainablefashion
#sustainabledye #seaweedcolor #giantkelp
#wastestream #byproduct #dutchdesignweek2021

The Kelp Forest Foundation collaborated with Kelp Blue and Zeefier, a Dutch design studio founded by Nienke Hoogvliet and Anne Boermans, to produce a seaweed dyed scarf using pulp of giant kelp, after the wet molecules have been extracted for other products. The kelp-based dye has created some beautiful soft hues like this soft orange reminiscent of the colour of sand dunes. It was presented during Dutch Design Week (16-24 October) in Zeefier's stand named "It's in our Nature" in the Klokgebouw, Eindhoven.

SOCIAL MEDIA

PANORAMA SOLUTIONS



The image shows the Panorama Solutions logo at the top left, followed by a screenshot of their website. The website features a dark background with a small boat on water. The main heading is "Solutions for a Healthy Planet" with the subtitle "Cross-sectoral, global learning and exchange". A "Read More" button is visible. Below the website screenshot, there is a grid of logos for various partner organizations.

PANORAMA
SOLUTIONS FOR A HEALTHY PLANET

Solutions for a Healthy Planet
Cross-sectoral, global learning and exchange
[Read More](#)

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH **IUCN** **UN environment programme** **GRID ARENDAL**
A Centre Collaborating with UNEP

rare **WORLD BANK GROUP** **UNDP** **ICRC**
International Council on Monuments and Sites

IFOAM ORGANICS INTERNATIONAL **ICOMOS** **EcoHealth Alliance**

OCTO OPEN COMMUNICATIONS ON THE OCEAN

KFF was selected, together with Kelp Blue, to be part of PANORAMA SOLUTIONS.

PANORAMA – Solutions for a Healthy Planet is a partnership initiative to document and promote examples of inspiring, replicable solutions across a range of conservation and sustainable development topics, enabling cross-sectoral learning and development.

PANORAMA is a joint initiative together with IUCN, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, the United Nations Development Programme, the United Nations Environment Programme, GRID-Arendal, Rare Conservation, IFOAM Organics International, the World Bank Group, ICOMOS and ICCROM with support from the German Federal Ministry for the Environment (BMU), the World Bank, the Norwegian Ministry of Climate and Environment and the Global Environment Facility.



ACHIEVEMENTS 2021

MACROCYSTIS SEED BANKS

MACROCYSTIS SEED BANKS

Giant kelp ecosystems across the world are being threatened by climate change and human intervention. The creation of giant kelp seed banks is key for the preservation of heirloom strains, biodiversity conservation, and ecosystem restoration. By collecting *Macrocystis pyrifera* 'seeds' (spores) from wild environments and storing them in 'warehouses', we will provide safe havens for long-term preservation. This is more essential now than ever, as it is estimated that 40% of plant species are vulnerable to extinction on a global scale, and recent numbers show that in California and Tasmania, more than 90% of the kelp forests have been lost. The seed banks will place awareness on the value of genetic diversity, provide key resources for scientific research on kelp cultivation, and be the center for starting material for future kelp farmers.

The Kelp Forest Foundation is working together with Hortimare to create a genetic resource bank consisting of *Macrocystis pyrifera* spores to be located in The Netherlands. Hortimare is a long-term orientated supplier of starting material for the seaweed industry globally and has the laboratory facilities and expertise to preserve the living material.



HORTIMARE
BREEDING & PROPAGATING SEAWEED



KELP SPORES SOURCING EXPEDITION



Aim: to collect spores from all major wild giant kelp beds around the world and create awareness of the value of kelp forests for humanity. We aim to do this by co-sponsoring a zero emissions sailing expedition, which will have 4 legs, starting in Buenos Aires, via Africa, Australia and New Zealand and ending in Alaska. This sailing trip will have an all-female crew composed of professional sailors and scientists.

FUNDING NEEDED: USD 4,000,000

LOOKING AHEAD

Kelp Forest Foundation will continue to push forward the scientific knowledge on the ecosystem services of cultivated giant kelp. In the coming years, we will focus on a range of research topics related to the carbon sequestration potential, impact on biogeochemistry and biodiversity, and the avoided emissions/beneficial effects of kelp products. These research projects will span several years and the knowledge will be shared publicly to help accelerate the entire sector.

ACADEMIC RESEARCH

TOPIC

TIMELINE

2021

2022

2023

2024

Carbon sequestration and geochemistry

- Carbon sequestration model
- Sediments study
- Geochemistry
- Carbon credit methodology
- Kelp composition
- Nutrient

Biodiversity

- Impact on algal ecosystems
- Impact on fauna
- eDNA surveys

Avoided emissions of kelp products

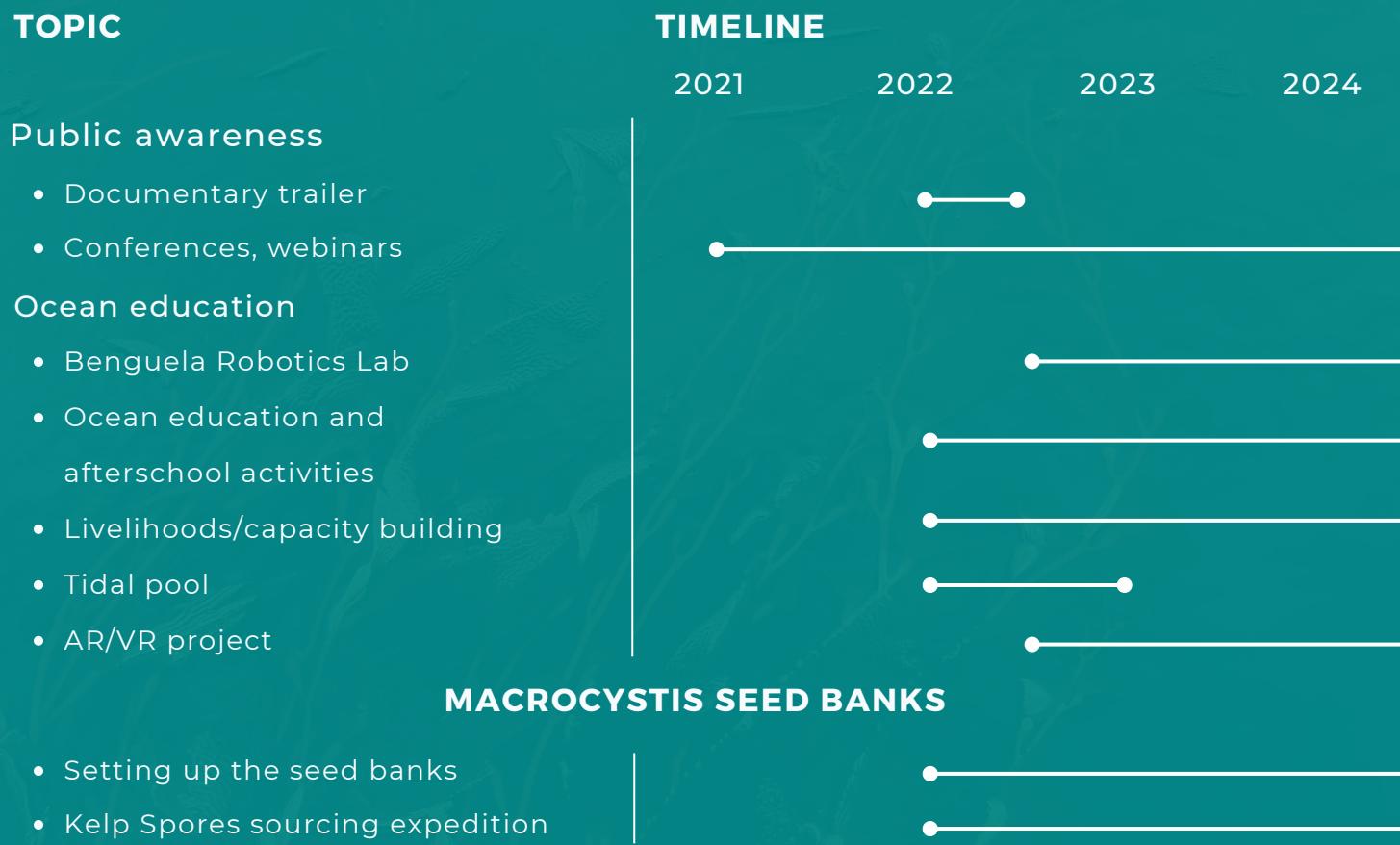
- Kelp biostimulants
 - Field trials
 - Impact on physiology
 - Impact on biodiversity
- Impact of kelp forests on acidification



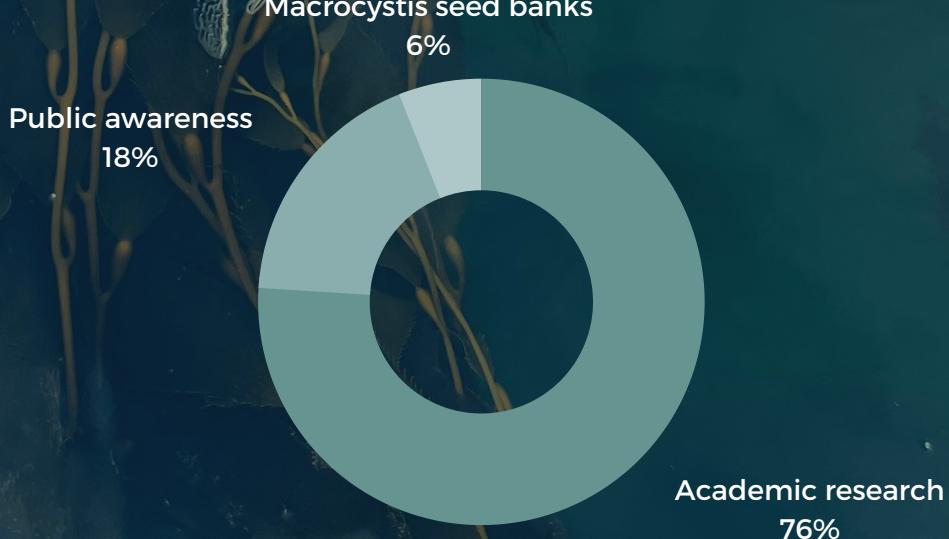
Kelp Forest Foundation will continue to share knowledge and increase public awareness by collaborating with companies, governments, NGOs, academics, future kelp farmers and other stakeholders. Ocean education and capacity building is key to build the next generation of ocean custodians, to help them protect our oceans and support them with skills that are essential in the industry. Our projects will focus topics such as robotics, ocean education, after school activities and providing opportunities to practise skills such as swimming and diving.

In the coming year, the next steps towards setting up the *Macrocystis* seed banks will be taken, with the plan to co-sponsor a zero emission sailing expedition to source kelp spores across the world.

KNOWLEDGE SHARING



2022 Estimated breakdown of budget per focus area



FINANCIAL REPORT

BALANCE SHEET

(after allocation balance of income and expenses)

ASSETS

Cash at bank € 239,441

Total assets € 239,441

LIABILITIES

Reserves € 236,096

Current liabilities € 3,345

Total liabilities € 239,441

INCOME AND EXPENSES

INCOME

Income from companies € 17,000

Income from non-profits € 243,000

Total € 260,000

EXPENSES

Total expenses € 23,621

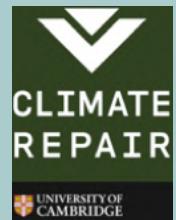
PARTNERS AND SPONSORS

A BIG THANK YOU TO OUR SUPPORTERS

THE KELP FOREST FOUNDATION IS INCREDIBLY GRATEFUL TO THE FOLLOWING FOUNDATIONS AND INSTITUTIONS FOR THEIR FUNDING SUPPORT.



AEB



2021 DONATIONS

€260,000

Kelp Blue
€17,000

AEB
€10,000

CCRC
€5,000

COmOn Foundation
€228,000



KELP FOREST FOUNDATION

STICHTING KELP FOREST FOUNDATION

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www.kelpforestfoundation.org

ANBI RSIN: 862389677