

IMPACT REPORT20



## OUR MISSION

## CORAL GARDENERS EXISTS TO REVOLUTIONIZE OCEAN CONSERVATION AND GENERATE A COLLABORATIVE ACTION TO SAVE THE REEF.

We are creating a world where human actions naturally protect marine life and its biodiversity, and where our purpose to save coral reefs would become irrelevant.





## FOREWORD



## TITOUAN BERNICOT

FOUNDER AND CEO OF CORAL GARDENERS

### I am extremely proud to introduce Coral Gardeners' first impact report.

Since our creation in 2017, we have been working relentlessly to show the world the importance of protecting and restoring coral reef ecosystems. We experienced victories, moments where everything seemed possible, we faced challenges and sometimes, we had to admit that we had failed. But giving up was never an option; we need the ocean, and now it needs us.

2020 was an unprecedented year. The pandemic heavily impacted the world and French Polynesia was no exception. Faced with new obstacles and restrictions, we had to stop our local eco-tours, and we did not do as many local awareness events as we had hoped. Yet, we managed to keep our reef restoration program up and running throughout the year. Our project has been in the spotlight more than ever, and we welcomed incredible guests like Guillaume Néry, world champion freediver, Nash Grier, famous YouTuber, and Mareva Galanter, former Miss France and Miss Tahiti.

2020 was also an opportunity to reflect on our mission on a local and global scale. During the lockdown, we started an internal work to structure ourselves better, refine the project, and build the foundations to be ready for the things to come. We transitioned Coral Gardeners from a sole NGO to a mission-driven start-up organization to be better equipped to move at speed and at scale to save the reef. We also developed our new restoration technique, launched our new website, and implemented new sustainable initiatives at our headquarters, just to name a few.

Everything was possible because of the people who decided to join our movement, to adopt corals and to believe in us. I want to thank each and every one of you on behalf of Coral Gardeners. Your support means the world to us, and we look forward to making 2021 another year of action. It's ON!









CO .....





# **OUR PURPOSE**

# Coral reef ecosystems are on the brink of extinction.

For us, our families, our friends, coral reefs provide food, income and protection from storms and floods. We are not alone - we are 500 million people directly depending on coral reefs alongside 25% of marine life relying on it to survive. Coral reefs are the foundations of a healthy ocean, which produces over half of the oxygen we all breathe.

If the reef dies, all of it would collapse. Scientists estimate that coral reefs will be condemned by 2050, unless action is taken now.

Human activities represent a major threat to coral reefs, from warming climate to pollution and many other destructive practices. Climate change increases the frequency of heat waves, water acidity and storms, which can eventually lead to corals' death.

We need to act now.

#### OUR IMPACT

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# **OUR IMPACT IN 3 KEY FIGURES**

From our creation in 2017 until the end of 2020, Coral Gardeners represents:

# €958,900

### RAISED

OUR IMPACT

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# 15,000

### CORALS PLANTED

# 590,500

## PEOPLE WHO JOINED OUR MOVEMENT







# OUR PROGRAMS

The core of our work is built around coral reef restoration. Every day, our restoration team jumps in the water to monitor coral reefs, the coral nurseries, or to plant corals. The aim is to restore abundance and biodiversity, increase coral reef resilience, and identify coral species that have better chance at surviving global warming.

Yet, we realized in our early days that reef restoration could be leveraged as an incredible awareness tool. We tell the story of the reef by sharing our restoration work, and also by promoting the beauty and interconnectedness of coral reef ecosystems. We want to spark a passion in our following that inspires change.

In 2020, we also asserted the potential of innovation and technology for coral reef restoration. Cuttingedge technology such as artificial intelligence, smart sensors and underwater cameras will help our restoration team improve their methods, the reliability of their monitoring and their understanding of the reef ecosystem. These technologies will also connect people from all around the world to the reef.

This is only the beginning; we want to create a global movement to save the reef.

## CORAL REEF ESTORATION







# OUR IMPACT

REEF RESTORATION AWARENESS INNOVATION



# **OUR RESTORATION TECHNIQUES**

Coral reefs are considered the most vulnerable ecosystem to climate change and local anthropogenic pressures. Since acting upon these stressors is not an easy task, the goal of coral reef restoration is to help the ecosystem recover or maintain its natural functions. To do so, we have tested different reef restoration techniques to better address the needs of Mo'orea's reefs.

### METHOD 01 Fragments of opportunity - 2017 to 2019

At the beginning of our project, we were collecting and transplanting corals called "fragments of opportunity" that had been broken off either by storms, anchors or people, and that ended up on the seafloor. We were planting them back on dead areas of the reef to give them a new opportunity to thrive. We were new to reef restoration and we were mentored by enthusiastic scientists who dedicated time to ensure the legitimacy of our efforts. Unfortunately, the ratio of efforts vs. results through time was inconclusive, and we came to the conclusion that ensuring resilience over quantity was a better approach to coral reef restoration. In July 2019, the visit and help of Dr. Austin Bowden-Kerby oriented us towards our current technique, that is more resilient-based.

We want to thank all the scientists who helped us shape our program: Dr. Caroline Orban, Dr. Vetea Liao, Gonzalo Pérez- Rosales, Dr. René Galzin, Matthieu Petit, Romy Schneider, Léa Lebechnech, Mathilde Loubeyres, Dr. Austin Bowden-Kerby, Louise Laing, Evelyne Chavent, Dr. Laetitia Hedouin and the CRIOBE.

\*a bleaching event is when a peak in water temperature causes corals' polyps to expel their symbiotic algae (Grottoli et all., 2017).

Sources: Loya, Y., Sakai, K., Yamazato, K., Nakano, Y., Sambali, H., and van Woesik, R. 2001." Coral bleaching: the winners and the losers". Ecology Letters 4 : 122–131. doi: 10.1046/j.1461-0248.2001.00203.x Grottoli, AndréaG, Tchernov Dan and Winters Gidon. 2017. "Physiological and Biogeochemical Responses of Super-Corals to Thermal Stress from the Northern Gulf of Aqaba, Red Sea". Frontiers in Marine Science (4): 215.

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### METHOD 02

### Super corals - 2020

We transitioned towards a new technique that focuses on "super corals" – species discovered to be more resistant to heat waves and bleaching events than others (Loya et all., 2001). Following this definition, Coral Gardeners commonly refers to super corals as "corals that have proven to survive extreme water temperatures and bleaching events in the wild and that should go on to spawn." In December 2020, we established our first gene bank nursery with fragments of super corals. Once these fragments will reach maturity, they will be fragmented and transplanted on degraded areas to repopulate the reef of Mo'orea.



corals identified in the lagoon are trimmed.



The fragments grow in our nurseries for months.



PLANTING

Once they are mature, they are trimmed and planted onto damaged reefs.



The transplanted

corals will keep on increasing the resilience of the reef.





# **OUR RESTORATION SITES**

Coral Gardeners restoration work is focused around the island of Mo'orea in French Polynesia. This map summarizes the work conducted from 2017 until now. In 2020, we focused mostly on three restoration sites : Tiaia 1, Tiaia 2 and Maharepa.

### INTERCONTINENTAL

Fragments of opportunity 300\* fragments planted Survival rate: N.A.

### BAMBOO

Fragments of opportunity 1,000\* fragments planted Survival rate: N.A.

\* monitoring data from 2017-2019 is provided with a 90% accuracy, and accounts for contingent errors inherent to the nature of the restoration activity For people on smartphones, please visit coralgardeners.org. \*\*desktop

MAHAREPA

Survival rate: N.A.

Fragments of opportunity

11,000\* fragments planted

### TIAIA 1

Fragments of opportunity 308 fragments planted Survival rate: 68%

### TIAIA 2 SUPER CORALS



10,000 fragments to be planted in 2022 Survival rate: 98%



### SOFITEL

Fragments of opportunity 1,500\* fragments planted Survival rate: N.A.

Fragments of opportunity 1,000\* fragments planted Survival rate: 45%

### AIMEO LODGE

Fragments of opportunity 100\* fragments planted Survival rate: N.A.



Source: Google Earth



### **IMPACT** R E P O R T <u>20</u>



# **OUR LARGEST SUPER CORAL NURSERY**

In December 2020, we established our first and largest super coral gene bank nursery, called "Tiaia 2".



Our goal is to transplant 10,000 super coral fragments from this nursery onto surrounding areas by early 2022.



### RESTORATION TEAM

Our team visits the nursery several times a week for maintenance and monitoring.

Super coral nursery





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#### SURROUNDING CORAL BOMMIES



#### Adopt here

You can choose amongst 10 super coral species hosted in this nursery to adopt and you will receive news about them.



#### CONNECTED BUOY

This technology collects valuable data to help improve our restoration efforts such as water temperature, wind, heat stress level, etc.

### CORAL ROPES

To ensure genetic and species biodiversity, 3,590 fragments were collected from 145 colonies within 20 different species.







## REEF RESTORATION

## AWARENESS

### INNOVATION





# **OUR SUPER CORAL ADOPTION PROGRAM**



### Our adoption program has always been our way for people from all around the world to join our movement and connect with our mission. Since the beginning of Coral Gardeners, 13,700 people from 99 countries have adopted corals.

In 2020, we changed our coral adoption concept to keep reflecting our work on the field. With our new restoration focus on super corals\*\*, we now prioritize resilience over quantity. As a result, we brainstormed and worked with our Coral Gardeners Collective members to redefine our adoption program.

Our new adoption program launched in December 2020 alongside a brand-new website, features 10 super corals up for adoption hosted in our gene bank nursery at "Tiaia 2".

\*desktop only. For people on smartphones, please visit coralgardeners.org. \*\*see p. 9

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02 CUSTOMIZE Your Super coral card and

UPER CORAL



Your Super coral card digital and/or print package.



About the growth and life of the super coral you adopted.

Through the adoption, one can join our movement and receive news from the life of their super corals, the nursery and our project.

The launch also coincided with the visit of our ambassador and YouTuber Nash Grier, with whom we created a social campaign that drove awareness for our mission and encouraged people to join our movement. The result was almost 2,000 people joined the new adoption program in only one month.





# **EMPOWERING THE NEXT GENERATION OF CHANGEMAKERS**



We believe raising awareness is key to inspire change across all generations, borders and oceans. It starts by empowering the younger generation locally. Since the beginning of our project, 2,800 island kids learned from us through activities, conferences or school interventions.

## TO'A ORA PROJECT

In 2020, faced with new restrictions due to the pandemic, we did not do as many local awareness events as we had hoped. Yet, we launched our first long-term collaboration with two classes from the high school Afareraitu, located on the East coast of Mo'orea, to offer young Tahitians the possibility to really commit to our mission and make it their own. The project is called To'a Ora and stands for "Living Reef

Through their sixth to third grade curricula, the students lead their own reef restoration project from the growth to the monitoring and the transplantation of corals with Coral Gardeners' assistance. In September, we introduced the students to coral restoration, and installed with them four quadrats of transplanted corals and four ropes of super coral fragments.

The quadrats are located on top of the reef to ease the monitoring, and the ropes are placed in a structure 9 m deep.

In December, we carried out our first growth and fitness monitoring that sparked enthusiasm and eagerness to learn more about corals and the ocean ecosystem. Every three months, we meet with the students, and together we follow the evolution of our project. We plan at transplanting the nursed coral fragments back onto the reef at the end of 2021. Alongside the coral restoration aspect, this collaborative project also aims at promoting our Tahitian culture and the key role that nature and the ocean play in it.

## 45 KIDS INVOLVED





# SOCIAL MEDIA STATISTICS

From day one, we harnessed the power of visual storytelling and social media to connect people from all around the world to the reef and the ocean. Here are some figures of our impact on social media since our beginnings:

owned social media impressions 164Mgenerated\* 21M likes cumulated on social media followers on social media from around the 590K world that follow our journey daily 4% engagement<sup>\*\*</sup> average rate \*number of times our organic content has been viewed from 2017 to 2020. \*\*likes, comments and shares on social media from 2017 to 2020.

about our project over the years. from all around the world such as National Geographic, The Red more.

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**GUILLAUME NÉRY** et les Coral Gardeners. Leur mission : sauver les poumons des océans





# **OUR AWARENESS CAMPAIGNS**

By sharing meaningful and unconventional campaigns, we aim to spark passion and inspire behavioral change. In 2020, the campaign that resonated the most with our community is one close to our hearts.

For World Ocean Day 2020, we launched on all our social channels a unique campaign called "Coexistence" to share our dream for everyone to live in harmony with the ocean. Our team went off the radar on an assignment to document an untamed but fleeting world where coral reefs still thrive and a diversity of creatures dwell in harmony around it, including us. Out of all posts dedicated to this campaign, one stood out: the "Manta Post".

"This shot reflects an incredible 2-hour interaction with a Manta ray, that was very curious and playful. Ryan, our lead photographer, managed to capture that perfect connection that almost feels surreal, but it was real and that's the story we aim to tell, a story of coexistence." - Titouan Bernicot, Founder & CEO

That post alone generated over 288,000 impressions and 11% engagement rate on our Instagram only. It gives us hope that people can connect to the ocean, and want to dedicate themselves to its protection.



It gives us hope that people can connect to the wildlife through our content.

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This is how we generate a collaborative action



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## REEF RESTORATION AWARENESS

State of the second

## INNOVATION





## INNOVATION

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Innovation is our third program and 2020 has been a great opportunity to lay the foundations of what we believe will be a game changer in the coming months and years. We started to experiment with cutting-edge technology such as artificial intelligence, smart sensors and underwater cameras to connect and gather a large amount of data of our coral nurseries and the reef ecosystem.

We installed a connected buoy at our "Tiaia 2" site that started capturing key weather and ocean data.

More than a playground for experimentation, we have anchored our vision into three main objectives:

Gather real-time data of the reef ecosystems 01 to improve our reef restoration techniques. 02 Create immersive experiences for our community. Contribute to advance science and technology 03 to protect the ocean.







# OPERATIONS









# HOW WE WORK TOGETHER - TESTIMONIAL

Cat, how does living in Montreal impact your daily job? At Coral Gardeners, we communicate a lot about our reef C: I would prefer to walk barefoot on a tropical island than the bitter Canadian winter right now! But I feel that being connected to the city gives me a different perspective. I am both the creator and the audience. This is how I can restoration efforts but our team works from all over the world. manage to make content click with the people like me. This is a uniqueness that allows us to create meaningful and Who are the "people" you are referring to? impactful content. Catherine, Head of Communications and Ryan, C: I'm referring to my own universe. Where I live people don't necessarily realize how much there is about the ocean. How we are all relying on it, how we are all connected to it. I'm referring to the people that are not living by the ocean. Lead Photographer, are talking about their daily lives, their vision Do you wish you were in the water more often? of awareness, and how they work together to achieve our mission.

#### First, tell us about yourselves

Catherine: I'm 30 years old and I live in Montreal. I have a Master degree in Marketing and I am the Head of Communications at Coral Gardeners.

R: To be honest, it has been a while that I haven't felt inspired. My inspiration comes and goes. When it works, it Ryan: I'm a 21-year old island kid from the Carribean. I'm a photographer and filmmaker. I want to become an artist. comes from music. The vibe, emotions and the state of mind. A whole atmosphere, for a couple of minutes. A C: You already are one. universe to discover and experiment. You make your own interpretation. Nature inspires me a lot too. We forget we all come from nature, the ocean. Somewhere along the way, we lost that connection. This is something we have to work on if we want to survive. I want to show the beauty of nature, especially of the things that people don't like. What part of your job do you like the most? Such as sharks, which are not monsters. They are the perfect balance and, their beauty inspires me too.

R: Well, I want to become a better one - an artist who uses its art to create impact.

C: Storytelling - I love to learn, which I do everyday with the team, and take ocean stories from a remote island and curate it for the people all over the world.

R: For me, it is taking a topic that people don't think is "cool" and make it cool, like coral reef restoration. To show the C: I'd say it starts with knowledge. You need to wonder and try to learn about coral reefs and ecosystems, like I'm doing everyday. Then keep on being curious and find actions that have a positive impact on nature. R: At Coral Gardeners, we provide inspiration. This is what I like about the project. We are inspiring people into action instead of forcing them into action and making them feel guilty and shameful. Nobody wants to be blamed, change needs to come from a conscious choice. And it will because they like what they see. We never accuse people or fall into negativity.

beauty of the ocean in order to make people want to protect it. What does being a Coral Gardener mean to you both? C: Gardening corals.\*laughs\* Of course, reef restoration is at the core. But also I think that being a Coral Gardener is a bit about boldness, doing things differently, and creating change.

R: I agree. It is going on the least travelled path. What makes Cat a Coral Gardener is her relentless dedication C: 100% agree. This is the essence of our communication. Sometimes it is hard to find the right tone of voice. But towards the communication, she is a Coral Gardener 24/7, always ON! Cat, can we talk about the part when you don't overall we want to inspire love for the ocean. Make people feel as we feel about the ocean. Show it in ways they've sleep? \*laughs\* never seen it before. It is a connection job.

C: Yes, being always ON is pretty much being a Coral Gardener. Since I live in Canada, I am not physically with the team. But Ryan and I talk hours everyday on every app you can think of.

R: It kind of became a private joke between us. It's also about having fun, we don't take things seriously. C: I do, take things seriously, but it is good that Ryan does not. We do of course a lot of meetings and brainstormings together but it would be easier if I was on site, especially for photoshoots. Anyway, I fully trust the team to deliver and most of the time there's no need for an extensive briefing, they get exactly what I have in mind...and even better!

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C: I wish I would be closer to the ocean to be more calm and creative. It would change from the city mindset which revolves more around speed and efficiency. Although I would love to be on Mo'orea, I sometimes ask myself, could I live somewhere so remote? I hope to find a way to enjoy what both worlds have to offer.

#### Ryan, where do you get your inspiration from?

#### What do you think people should change to save coral reefs?

#### A last word?

C: Let's save the reef! R: It's ON!





# **OUR COMMITMENT TO SUSTAINABILITY**

### ELECTRIC CARS Both powered by our stored

solar energy.



24 SOLAR PANELS They produce the energy needed to power buildings and vehicles.



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LOCALLY-SOURCED WOOD DECK

Our island of Mo'orea is everything to us, and we are dedicated to building a sustainable and inclusive environment in which everyone can be the best version of themselves. In 2020, we implemented different initiatives towards a more sustainable work environment, so our commitment underwater can reflect on dry land too.

### Using solar energy since April 2020 is:

#### TONS -8,3

reduction in CO2 emissions

#### -50,000 ΚM

distance travelled by our electric cars compared to gas vehicles



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# **OUR BUSINESS MODEL**

### 2020 marked a new chapter for Coral Gardeners' organization.

Since our beginnings, we have proven our ability to reach people's hearts and tell the story of the reef like no others have before. It took a good dose of courage, boldness and energy, but we knew that to keep going further, we had to look further.

2020 was a year of reflection and reinvention, and it gave us the opportunity to rethink our legal structure. We recognized that solely operating in the non-profit sector would not provide the scale, agility, and funding necessary to pursue our ambition.

We moved towards a purpose-driven business mindset and structure to accelerate the pace of change and actions to save the reef.

We are not pursuing fame or profit. No dividends: all our profits are reinvested into our missions.



Coral Gardeners NGO has 501(c)(3) counterparts for U.S. donations.





# **OUR REVENUE SOURCES**

Since our early beginnings, we have always tried to be financially sustainable and independent. This is why 74% of our revenue comes from our coral adoption program. The trust and engagement of our community are the fuel of our mission.

# €457,800

### TOTAL REVENUES IN 2020







# **OUR ALLOCATION OF EXPENSES**

## €475,100 TOTAL EXPENSES IN 2020

Coral Gardeners is still in the early stages of its development as an organization. In 2020, we invested in our programs and we set up the foundations of our organization to prepare for the years to come.

## OPERATIONAL SPENDING SUMMARY Travel & Food 4% Legal 3% Bank & Insurance 1% Human Resources 32% Software & Technology 7% Marketing 4%





## 2020 IN A NUTSHELL



WE ARE

GARDENERS

### FEBRUARY Coral Gardeners' film is out.



COVID hits the world. Eco-tours stop. We take time to regroup.



MAY

### SEPTEMBER

Launch of To'a Ora project: local kids start their own restoration project.

### NOVEMBER

The CG Farm is set. The team grows its own organic vegetables using permaculture principles.



# NOVEMBER

Change in the legal structure. Coral Gardeners is now both a LLC and a NGO.



ΜΑΥ Launch of the CG Collective, a community helping us shape the future of the ocean.



SEPTEMBER Our first connected buoy is installed at "Tiaia 2" in Mo'orea.



Release of Hold Your Breath campaign with our ambassador Guillaume Néry, featured on the cover of The Red Bulletin.



### DECEMBER

The new gene bank nursery is installed with 3,590 super coral fragments.



### DECEMBER

Launch of the new super coral adoption program with our ambassador Nash Grier.





## THIS IS JUST THE BEGINNING OF THE OCEAN REVOLUTION

Since 2017, Coral Gardeners planted more than 15,000 corals and over half a million people from around the world joined our movement and follow our journey daily. This is a good start.

We need to keep getting stronger and stronger by improving our methods, telling stories, innovating and expanding. We will keep empowering our community, ambassadors and partners all over the world. Coral Gardeners are not a team of 21, we are a global movement of thousands.

Together, let's save the reef.



