2020 has been quite a year. From the essentials of sending our children to school and shopping for groceries, to the tragic loss of loved ones and friends, our lives have been characterized by dramatic shifts over the last year.

Despite the changes that 2020 has brought to our lives, one thing has remained constant: the Coral Reef Alliance (CORAL). While many of our programs have had to pivot as the communities we work with grapple with the effects of widespread lockdowns, economic depression, and dramatic declines in tourism, the spirit of how we conduct our work remains unchanged.

When Stephen Colwell founded CORAL in 1994, he and his partners understood that building an organization grounded in consistent, strong relationships would create a strong foundation for a successful conservation organization. That's why they named the organization an “Alliance.”

That spirit continues to shape our work today. On the ground, CORAL builds alliances and drives results, creating the conditions that allow change to happen among key stakeholders, and ensuring local communities are the authorities of managing their natural resources. We do this all in the spirit of partnership: bringing the right people to the table, delivering the necessary resources, and continuously building bridges and relationships.

The same thing happens at the global level—we collaborate with other organizations and scientists to deliver ground-breaking research, then we combine the skills and approaches of conservation professionals across the field so that, together, we can collaboratively put the best science into action to ensure coral reefs survive climate change.

While CORAL is consistently the driving force behind change, if we are true to our “Alliance” spirit, the results will come from across the organizations and communities we partner with.

George Bernard Shaw once said that progress is impossible without change. I am thankful that your continued support has allowed CORAL to drive meaningful, adaptive change for the world’s reefs and build a foundation for the work to come. I know that your support of our 2021 plans will continue to unite the best minds and make a difference for corals globally.

Best wishes for a restful and healthy holiday season,

Kirby Ryan

Board Chair
What does it mean to be resilient to change? I’ve found myself asking that question a lot these days—both personally as I navigate the new school year and altered social landscape with my family, and professionally as I lead CORAL through these unprecedented times.

In the realm of conservation, we tend to define resilience as the ability to bounce back after a disturbance. But the problem with that definition is that it puts the focus on going back to a state of normal, to the way things were before.

Sometimes, a disturbance or a difficulty is so large that what used to be normal isn’t normal anymore—and the only way to survive is to change. I would argue that it’s this ability to adapt—to evolve to a new state—that makes a community or an ecosystem stronger.

For most of the communities we partner with, what used to be normal is no longer normal. When COVID-19 hit, life changed overnight. Travel and in-person meetings were no longer safe. Revenue streams dried up. Governments redirected their priorities.

It was a true test of strength and resilience. Were the programs that took us more than a decade to build robust enough to survive such drastic changes? Were communities strong enough to weather this storm? Spoiler alert: they were.

But they weren’t resilient because they were able to return to the way things were before. They were resilient because they were able to adapt, and change. And because the communities were resilient, coral reefs have a better chance at large scale adaptation as well.

Our mission is to save the world’s coral reefs. But it’s impossible to talk about saving coral reefs without also talking about the communities who depend upon them. Over the next few pages, you’ll read about how some of these communities have coped with the global changes that have hit them this year, and how they plan to adapt and become stronger in the future.

As we approach the end of this tumultuous year, I hope these stories give you strength and inspiration to find your own resilience and adapt to this new normal. May 2021 bring us all much-needed relief and renewal, and may your holiday season be filled with peace and hope.

Sincerely,

Dr. Madhavi Colton
Executive Director
Roatán is one of the three main islands that make up the Bay Island chain on the Caribbean coast of Honduras. Its economy is highly dependent upon tourism, and travelers from around the world flock to the island to enjoy its beautiful white sand beaches and turquoise waters. The Roatán Marine Park (RMP) is one of 14 organizations that are responsible for day-to-day management of the resources within the Bay Islands National Marine Park, the largest marine protected area in Honduras.

Like many businesses and organizations on the island, RMP is almost entirely reliant upon tourism—85% of its operating budget is tied to tourism, both directly and indirectly. So when COVID-19 led to widespread global lockdowns and a sudden halt in tourism, it hit the community and RMP like a ton of bricks.

Overnight, their revenue plummeted. Their four gift shops, which typically account for nearly half of their revenue, no longer had any customers. Donations from tourists stopped coming. Hotels, restaurants and dive shops halted their sponsorships as they struggled to cover their own expenses.

“We couldn’t believe it. It was very scary,” describes Lean. “Personally, I was very positive, thinking it would be over in a few days or a couple of weeks. But after a couple of weeks, I realized that we were going to have to make some tough decisions and prioritize.”

The RMP team decided that maintaining their patrols was their top priority. “With everything that was happening, people were going to head to the ocean to get food,” says Lean. “We needed to make sure they did it sustainably.”

“As predicted, from April to June RMP saw a 150% increase in poaching compared to the same period last year. But paying for patrols meant they had to make cuts elsewhere. The non-patrol staff agreed to cut their hours and their salaries by 50%, and they closed all but one of their gift shops.

Despite the hardships, Lean says RMP has been fairly resilient overall. She attributes much of that resilience to the relationships and collaborations they have in the community, which, she says, is largely a result of the support they have received from CORAL over the years.

She highlighted their partnership with the Honduran Navy as an example, something CORAL helped establish. Every RMP patrol boat carries two members of the Navy to help with enforcement and safety. With five patrol boats, that’s at least ten Navy members per day. Typically, her staff would drive to another part of the island to pick up the Navy members from their base and bring them to the park office before each patrol. But with resources and time now a scarce commodity, community members have stepped up to house and feed Navy members locally and donate fuel for the patrol boats.

RMP staff members also have taken to digital fundraising and marketing efforts. “We’re going digital,” says Lean. “We opened up a store online so now we can sell our products online, and we’re doing online fundraising also.” And with CORAL’s help, they have received a few grants to help cover some of their operating costs. CORAL has also created the Honduras COVID Reef Rescue Fund to solicit donations for RMP.

Slowly, tourists are starting to return to the island. “People are feeling more positive now,” says Lean. “People are starting to work again and some of the dive shops are starting to get a small trickle of customers.”

Looking forward, Lean knows they will be feeling the impacts of this downturn for years to come. But she’s confident in the organization’s ability to adapt and sees these past few months as an opportunity for the community and local businesses to reassess and reevaluate how they operate. At RMP, they are brainstorming new ways to diversify their revenue stream and are looking to secure more grant funding to make that happen.

In the meantime, Lean encourages people to start following the Roatán Marine Park on social media and visit Roatán again. “The island is here waiting for you guys to come see it and take care of it,” pitches Lean. “This is the time to come to Roatán—the reef has taken a break from people, and that’s a good thing.”

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Finding Resilience in Honduras

As Executive Director of the Roatán Marine Park, Francis Lean can relate to her tourist clientele—she used to be one of them. Originally from Tegucigalpa, the capital of Honduras, Lean used to join the 1.6 million people who visited Roatán on vacation each year.
It’s 5:30 a.m. on a Wednesday, and Erica Perez leaves her house in Hilo to start the slow, dark, one-and-a-half hour drive to the South Kohala coast on the other side of Hawai‘i’s Big Island.

She arrives at the first site at 7:00 a.m., where she meets long-time community volunteer Keith Neal. They put on their masks, unload the testing equipment and Perez wades her way to knee-deep water to collect their first water quality sample. Neal stays behind to watch the equipment. It’s the first of five sites they will collect samples from that morning, trying to hit all before the sun has a chance to break down bacteria. Once sampling is finished around noon, they part ways and Perez travels south to drop the samples off at two different laboratories before making her way back home to wait for the results.

The sampling is part of an island-wide collaborative effort that Perez launched as CORAL’s Program Manager on Hawai‘i Island. The project, called Hawai‘i Wai Ola, brings together eleven different organizations, volunteer community members, and scientists to champion water quality issues on Hawai‘i Island. Right now, the Hawai‘i Department of Health samples and reports on water quality at sites around the island. But their resources are scarce, so sampling is limited and inconsistent.

“Our capacity on-island has been hit hard the last five years between hurricanes, volcanic eruptions and now COVID,” explains Perez. “If we want to continue to be informed and have vital information about our water resources while our government is so strained, then we need to support our government in as many ways as we can.”

The plan was to launch a volunteer team this summer that would regularly collect water quality samples in Kona, Hilo and South Kohala. Their efforts would bring a more robust and consistent understanding of water quality issues across Hawai‘i Island and reduce some of the pressure on the Hawai‘i Department of Health. But when COVID-19 hit, the volunteer program was put on hold and in-person training was canceled. As case numbers continued to rise on the island, it became near impossible to allow groups of volunteers to gather in a safe manner to sample, let alone to be trained. And beaches were closed, so team members couldn’t access sampling sites.

Typically, a sampling team consists of three people. “The sites are really spread out and there is a lot of equipment,” describes Perez. “It’s hard to load and unload on your own, and you can’t just leave thousands of dollars of equipment on a table while you run into the water to collect a sample.” However, Erica and other Hawai‘i Wai Ola members have been forced to occasionally go out on their own, taking advantage of regulatory exemptions to access beaches when possible.

That’s because this is a prime time for sampling. There’s a silver-lining to the fact that tourism was restricted in the islands and most beach activities were forbidden: the team had an opportunity to understand what water quality looks like when no one is visiting the beaches.

“I can’t stress enough the importance of collecting data when people weren’t using the resources,” says Perez. “There were no tourists. Only a few locals were on the beach, very few people were using sunscreen and getting in the water. It was the perfect opportunity to create a baseline for what minimum-use looks like. Then, when things fully reopen, we can look at that baseline again with more people and more use and compare the two.”

Perez is excited for the opportunity to gain a better understanding of how much human use and tourism affects water quality—even if it means continuing to collect samples herself with just one other person to help. It’s an opportunity they wouldn’t have had if 2020 hadn’t brought so many challenges. In the meantime, though, she’s working hard to convert the volunteer training into an online platform so volunteers will be ready and prepared to start sampling when it’s safe.
In the conservation community, we talk a lot about ‘ecological resilience.’ The term essentially refers to an ecosystem’s ability to recover from a disturbance: for example, the ability of a coral reef to regrow after being damaged by a storm. But what if the disturbance doesn’t go away? What if the ‘disturbance’ is a warming planet? Not only is climate change not going away, it’s getting worse.

The research that we have been leading provides us with answers about what we can do today to help corals thrive into the future. But like the problem, the solution is complicated—no single organization can address this crisis alone. That brings us to the “Alliance” part of our name: moving forward, we must work at global scales to create new collaborations that will help coral reefs thrive into the future.

To survive, corals are going to need to adapt to new conditions. In order to adapt, they are going to need to be resilient enough to survive disturbances. And they are going to need to evolve.

For decades, conservationists have been working at local scales to reduce the threats to reefs—to build marine protected areas that reduce overfishing, to ban destructive practices like blast fishing, and to restore streams and build wastewater treatment plants that improve water quality. This work helps build a reef’s resilience, or its ability to recover from disturbances.

We also need to create the conditions that allow corals to evolve, and this is where our groundbreaking research comes in. Over the past five years, we have been developing robust mathematical models to explore how evolution can rescue reefs from rising temperatures. Our research shows that conservation approaches based on modern portfolio theory—a strategy that investors use to minimize risk and maximize returns—are the most successful at helping corals thrive over time.

According to portfolio theory, when we protect a diverse portfolio of corals, we allow nature to determine which corals are best suited to survive in today’s changing conditions and give coral reefs the best possible chance of success. This approach is at the heart of our concept of Adaptive Reefsces—networks of healthy reefs that are genetically connected to each other through the movement of baby corals. By creating protected areas of healthy reefs in environmentally diverse and connected locations, corals have the best chance possible to evolve. Adaptive Reefsces allow corals that have adapted to changes (e.g., warmer water) to spread to other areas.

We are already working with our partners in the Main Hawaiian Islands and across the Mesoamerican Region to create these networks. But working at local scales alone isn’t enough. Joining together is the only way to achieve the scale required to address this crisis—that brings us back to the “Alliance.”

We are launching new work to build alliances across the conservation community. By fostering partnerships with academic researchers, conservation scientists, practitioners, and policy experts, and by building upon existing conservation efforts, CORAL is moving Adaptive Reefsces from global conservation theory to applied local action.

Saving coral reefs is going to take a global effort. We are going to need the strengths and resources of a lot of different conservation organizations simultaneously. By joining forces, we’ll have a much stronger chance of ensuring coral reefs survive.

Thank you for joining us in this effort; we look forward to working with you.
Our work is the product of many people coming together to prioritize saving coral reefs. We are honored and grateful to have your support as we continue to navigate the many changes that have come our way this year. Thank you for standing by our side. We couldn’t do it without you.

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