



THE OCEAN FOUNDATION
**ANNUAL
REPORT**
July 1, 2021 - June 30, 2022

Celebrating two decades of marine conservation.

WHAT DO YOU WANT TO DO **FOR THE OCEAN?**

As the only community foundation for the ocean, we're dedicated to reversing the trend of destruction of ocean environments around the world.

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A MESSAGE FROM THE PRESIDENT

20 Years In: A Business Anniversary is a Reason to Celebrate!

Time flies so fast! It's been two decades since The Ocean Foundation was founded. According to the Bureau of Labor Statistics, only 25% of new businesses make it to 15 years or more. They survive because they are adaptable to new trends, produce high quality work, and remain focused on their core values.

We like to think that The Ocean Foundation is not effective *because* it is two decades old. Instead, The Ocean Foundation is two decades old because we are *very good* at what we do. And, because we have a community of partners, colleagues, grantees, advisors, and supporters like you. I remain so grateful for every helping hand that got us here.

Context

When we were founded, Facebook, Twitter, YouTube, and Instagram did not exist. LinkedIn was brand new. The Concorde SST was still flying, and the original VW Beetle was still being manufactured in Mexico. We had not yet had ANY of the **10 hottest years** on record! Climate change was solidly on the radar, but the iPhone wouldn't be introduced for another four years. The U.S. Commission on Ocean Policy was holding listening sessions around the country. And, we were just beginning to think about sourcing **medicines from the ocean**.

Our first year's budget was \$200,000, and now, it is nearly \$15M. Along the way there have been challenges and successes.

Challenges

Over the past 20 years, the world has experienced some of the most violent storms, the worst flooding, and the biggest infrastructure disasters in known history. Looking back, it is amazing how many events that made headlines also directly affected members of the whole TOF community — our advisors, our partners, our staff, and our grantees. These challenges were also opportunities for us to help where we could, and to think beyond the immediate emergency. We looked for ways to support those who needed to understand the impact on marine life or on the resilience of coastal communities and to help frame longer-term responses and resilience.

Looking back, I am amazed at just how much has happened.

“When we were founded...We had not yet had ANY of the 10 hottest years on record! Climate change was solidly on the radar, but the iPhone wouldn't be introduced for another four years.

Mark J. Spalding
President

In December 2004, we were working to elevate the need for greater shipping safety following the breakup of the *MV Selendang Ayu*. We were concerned about the loss of human life during the rescue, and the deadly effects of the more than 130,000 gallons of bunker oil and 50,000 of soybeans on the ocean floor and the nearby islands.

Like everyone else, the world was then stunned when the massive Indian Ocean tsunami struck on December 26. In its aftermath, we pivoted to support a quick response study on how those places that still had coastal mangroves and other natural defenses fared better than those that had been denuded before the tsunami. It was hoped that this knowledge would inform rebuilding and restoration processes, as well as encourage active conservation of existing natural defenses.

In Spring 2005, we briefed marine funders on climate change and the ocean, with a special look at ocean acidification — the kind of quiet issue that rarely makes headlines. And yet, we knew we had to figure out how to build global capacity to understand local conditions, because ocean chemistry changes unevenly both geographically and temporally. Just a few months later, it was Hurricane Katrina, the powerful storm that caused 1,836 deaths,

the vast majority in low-lying Louisiana. After the first humanitarian responses, we helped communities assess their coastal systems and identify the water pollution in the Gulf from the receding floodwaters. That fall saw more powerful storms—including Rita, which flooded New Orleans again, and Wilma caused another \$19 billion in damage in Florida.

We were saddened when the Baiji, the Yangtze river dolphin, became extinct in 2006, and were inspired to re-double our efforts at saving the Vaquita porpoise and other marine mammals.

The tragic January 2010 earthquake in Haiti put an abrupt end to our sustainable tourism work there, and in April the largest oil spill in U.S. history caused wide-spread and lasting damage to the Gulf of Mexico. In Haiti, we encouraged Royal Caribbean to use its vessels to deliver relief supplies and responded to inquiries about the potential harm to nearshore systems from debris. As for the Deepwater Horizon disaster, members of our Board of Advisors provided expertise to the responders and the communities. That summer, and for years afterwards, we funded the only independent testing of whales and other animals for toxic contamination (All other testing was done by those working as expert witnesses for the government or defendants in the spill litigation).

In 2011 we grieved with our Surfrider Japan partners when a 9.0 earthquake near Japan triggered a tsunami and the meltdown of the Fukushima Nuclear Power Plant. And when contaminated debris reached the shores of North America, we reached out to our partners in Alaska and the Pacific Northwest. This was also the year the planet reached 7 billion in population – adding more demand for the ocean’s natural resources.

In the fall of 2012, Hurricane Sandy not only caused \$70 billion in damage and killed 233 people, but also changed the coastline in many places and washed millions of tons of debris into the ocean. We worked with organizations up and down the mid-Atlantic coast to craft longer-term restoration and management plans for communities that had never experienced this kind of flooding and other damage.

In 2013, one of the most powerful storms ever recorded, Typhoon Haiyan, killed an estimated 6,150 people in Vietnam and the Philippines and devastated communities with torrential rains and winds of up to 196 miles per hour. The harm to coastal and nearshore environments undermined the coastal economy and subsistence fishing for years afterwards – and was another harbinger of the consequences of excess greenhouse gas emissions.

Successes

You will see in this report a timeline that touches on the good news of each of our 20 years, but it cannot do justice to what our fabulous team has accomplished. Please join me in thanking all of them and our broader community of advisors, board members, grantees, and partners for their hard work.

And, thank you for supporting our organization for 20 amazing years. Your positive encouragement of our work inspires everyone here to give their best. We will continue to do our jobs well, and hope to earn your support for years to come.

Plans for the Future

Looking forward, we plan to: Increase our focus on **Equitable Ocean Science Capacity**, **Ocean Science Diplomacy**, and **Supporting Island Communities**. Continue to grow our climate resilience work through our **Blue Resilience Initiative**. Focus our sights on contributing to the negotiation and adoption of an effective international agreement to **address plastic pollution**. And, build a new **ocean literacy initiative**.



Your positive encouragement of our work inspires everyone here to give their best. We will continue to do our jobs well, and hope to earn your support for years to come.

Mark J. Spalding

We will grow our work on the **blue economy** and **investing in ocean health** together with Rockefeller Capital Management, the United Nations Environment Programme Sustainable Blue Economy Finance Initiative, the Commonwealth Blue Charter, and the High Level Panel for a Sustainable Ocean Economy.

And, we will spend some of our time working on the intersection between **underwater cultural heritage** and environmental conservation. We will continue to ramp up our work to debunk false claims about **deep seabed mining**, as well as the many mechanical and chemical climate or weather geoengineering technologies. The tricky thing about a silver bullet is that its use has consequences — and we must ensure that those consequences do not undermine the ocean's health even more than human activities already have.

At the same time, we will continue to provide best-in-class **philanthropic advisory services** for ocean conservation, as well as for **fiscal hosting** of exciting and innovative projects. We will prioritize our efforts to be innovative and lead on integration of **diversity, equity, inclusion**, environmental justice, climate justice, and decolonization into all our work and that of our community.





Thank You!

Our story begins and continues with gratitude.

You have stood with us as we learned, changed, and grew for these 20 years. Thank you.

We welcome your continued support for our global ocean and the dedicated people who work so hard to restore abundance and limit harm.

For the ocean,

MARK J. SPALDING



Special thanks to our amazing team and our community of current and former advisors, board members, grantees, and partners around the world. Together we must keep working for a healthy, more equitable future for coastal communities, island nations, and indeed, all life on earth, which means restoring abundance to our global ocean.

OUR IMPACT

Where Your Money Goes

Fiscal Year Ended June 30, 2022

\$4,668,278

TOWARDS CONSERVING MARINE HABITATS AND SPECIAL PLACES

We work to conserve the places and habitats that are special to the people who rely on them most.

\$1,928,185

TOWARDS PROTECTING SPECIES OF CONCERN

We strive to protect those species of concern and their habitats for future generations.

\$1,253,490

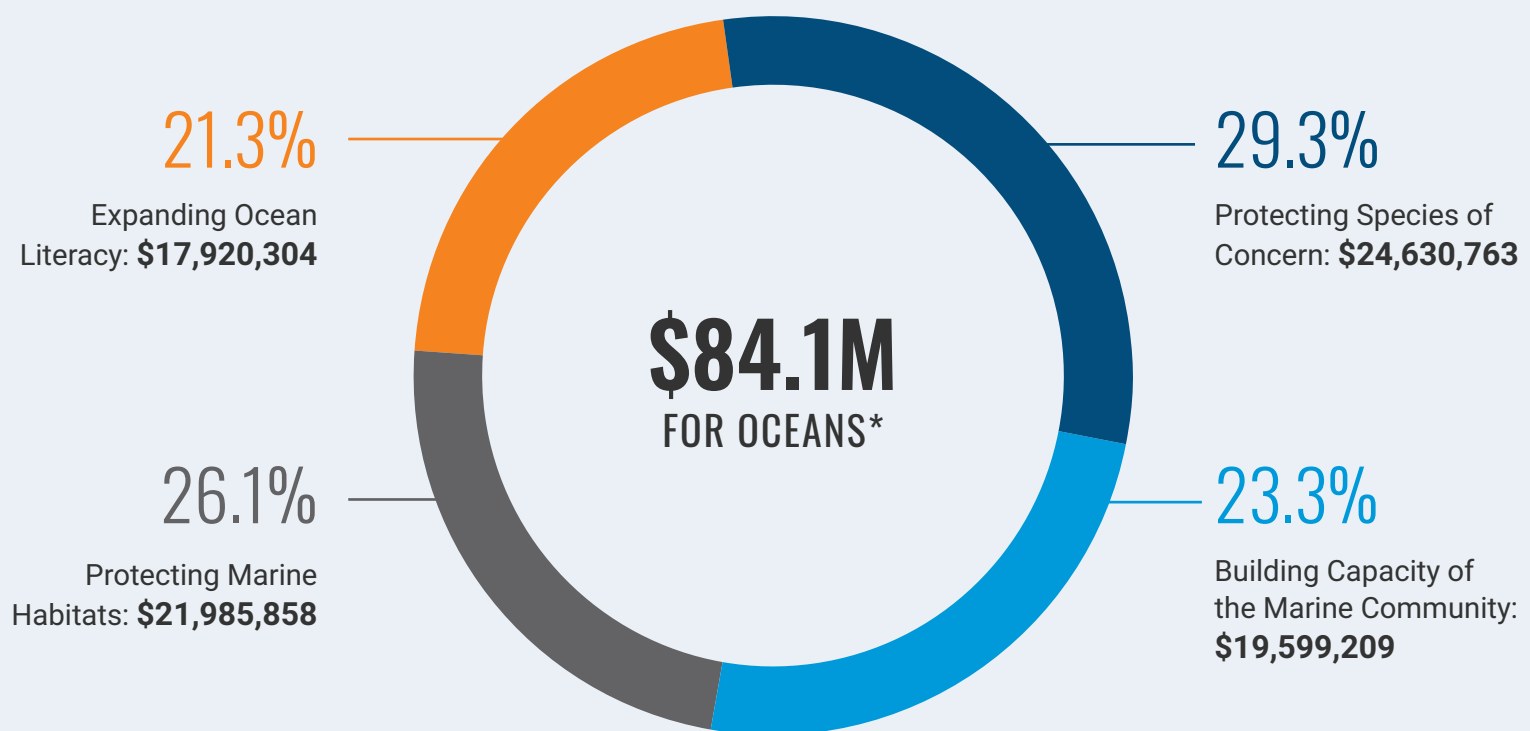
TOWARDS BUILDING CAPACITY OF THE MARINE COMMUNITY

We empower implementers so that marine conservation thrives well into the future.

\$1,839,551

TOWARDS EXPANDING OCEAN LITERACY

We work to educate future ocean leaders, expand ocean knowledge, and increase public awareness — oftentimes the first steps towards preserving a healthy ocean.



*CUMULATIVE OVER THE PAST 20 YEARS

A circular logo with a white background and a blue border. Inside the circle, the number '20' is written in a large, stylized blue font. Below the '20', the word 'YEARS' is written in a smaller, blue, sans-serif font.

20
YEARS

FOR THE OCEAN

Since its founding 20 years ago, The Ocean Foundation has been dedicated to improving human relationships with the ocean. When we first started out, we were compiling resources to support our community-based work in marine conservation. Today, we have created a diverse network of donors, island communities, sustainably-minded corporations, conservation-focused programs, and other individuals who care about the ocean and its influence.

As the only community foundation dedicated to the ocean, we have pursued our focus of building capacity and equipping local communities with the resources to protect and restore global marine ecosystems. Our goal has always been to get funds to the people who can make a difference. We have been able to achieve this through the distribution of grants, donations, and other funds to the projects that will directly impact coastal communities and overall marine restoration.

In the formation of our four initiatives – International Ocean Acidification, Blue Resilience, Redesigning Plastics, and Community Ocean Engagement Global – we have spearheaded a diverse range of ocean conservation problems through a solution-based, collaborative approach. From there, we continue to expand into new areas of interest outside of our core initiatives. While each of these programs target specific issues currently impacting our ocean, they all contribute to our driving purpose of catalyzing change through the access to knowledge, resources, and connections.



As we look back on our growth and expansion over the last 20 years,
we are so excited to see what we can do in the years to come.



2002-2022: A TIMELINE

Here at The Ocean Foundation, we celebrate the small victories for the ocean wherever they occur. And, we keep pushing for the bigger ones.

That's why as we look back on the past 20 years, we both acknowledge that much more remains to be done, and celebrate that we've made crucial steps forward in improving the ocean's ecosystems and the communities that depend on them. This timeline highlights only a few of our many accomplishments over the past 20 years.

Developing our community foundation

With the growing awareness that individuals' work could be supported within a community problem-solving context, photographer Wolcott Henry led a group of conservation experts, venture capitalists, and philanthropists in establishing The Coral Reef Foundation as the first community foundation for coral reefs. After its inception, a broader question quickly emerged: How can we re-imagine the "community foundation" model to support conservation for other underfunded ocean ecosystems? In response to this question, The Ocean Foundation was launched. Soon after, Mark J. Spalding became President with Wolcott Henry as founding Chair of the Board.



Funding local conservation through green resort partnerships

The Ocean Foundation's Board of Directors was established with 11 founding members. And, we pioneered a new kind of resort partnership with the developer of the Villages of Loreto Bay, Mexico – where we set up the Loreto Bay Foundation to receive and then invest 1% of gross real estate sales in the Villages of Loreto Bay back into the community and the conservation of the Loreto Bay National Marine Park. The Foundation became a trusted partner in the community, a cherished relationship that continues to this day.

Expanding our ocean topics

The Ocean Foundation co-sponsored the first ever Conference on Ocean Literacy with our partners, the National Marine Sanctuary Foundation and the National Oceanic and Atmospheric Administration. We helped organize the annual marine funders meeting in Belize, where our staff distributed recent research, analyses, and policy updates on topics including coral reef resilience, tourism, development, and resource overuse in the Caribbean region. And, we developed more than 20 special reports, updates, and newsletters to educate our donor and grantee community about the most pressing ocean issues.

2002

2003

2004

2005

2006



Turning the tide of ocean conservation: Our first initiative

In The Ocean Foundation's first year, we officially launched our International Ocean Acidification Initiative. Our initiative fosters innovation and partnerships to support scientists, policymakers, and communities around the world – helping build the capacity to track, understand, and respond to ocean chemistry changes.



Growing our reach

We expanded our role within ocean philanthropy by helping organize the annual meeting of marine conservation funders in California – pushing to ensure cutting-edge science on climate change and ocean acidification was shared with marine conservation funders. 2005 was the first of many years we assembled and analyzed the annual marine funders survey. We also established a Rapid Response Fund in the wake of Hurricane Katrina, to offer immediate assistance and respond to affected marine resources and the livelihoods of those dependent on them.

PHOTO © HAROLD CAMILO



Pushing the importance of blue carbon

Coastal restoration rapidly became a crucial element to our work. We officially launched our Blue Resilience Initiative to support coastal community resilience by restoring and conserving coastal habitats, and equipping key stakeholders with the tools, technical expertise, and policy frameworks to achieve large scale climate risk reduction. Under our initiative, we launched our SeaGrass Grow Project to support the restoration of seagrass meadows.

Continuing momentum and understanding the harm from dispersants

In 2010, The Ocean Foundation hosted a total of 67 fiscally sponsored projects, launched the Gulf Restoration Fund in the wake of the Deepwater Horizon explosion and spill, attended and proposed a collaborative ocean action plan at the CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) convention in Doha, shed light on the unintended harm being done by the unprecedented use of dispersants, and made \$1.7 million in international grants to support ocean conservation – among countless other endeavors.



2007 2008

2009

2010

2011

Fighting for ocean science diplomacy

Ocean science diplomacy quickly became a major cross-cutting theme throughout our work. More specifically, our Cuba Marine Research and Conservation Program formed the Trinational Initiative to help advance collaboration and conservation in the Gulf of Mexico and Western Caribbean, among the three countries that border the Gulf: Cuba, Mexico, and the United States. We have been working to establish a framework for joint scientific research to preserve and protect our surrounding and shared waters, by facilitating collaboration through annual Trinational Initiative Workshops.



Placing our ocean at the center of global dialogue

2009 demanded all the versatility and responsiveness that The Ocean Foundation was designed for. We supported conservation and restoration projects internationally and domestically, attending workshops, partnering with key organizations and foundations, and contributing to crucial assessments and dialogue. On June 8, we celebrated the first United Nations designated World Ocean Day. Although many countries had celebrated Ocean Day for nearly a decade, it took the leadership of Bill Mott of The Ocean Project (a TOF project) to secure the official U.N. designation.

Investing in the world's ocean

With lead gifts from the Keith Campbell Foundation for the Environment, the Henry Foundation, and The Curtis and Edith Munson Foundation, The Ocean Foundation continued to develop and promote cutting-edge solutions for the ocean through the launch of a new Ocean Leadership Fund – later renamed our Research and Development for the 71%. One of the fund's early projects, in partnership with Rockefeller Capital Management, resulted in the Rockefeller Ocean Strategy – a fund to hold shares of publicly traded companies that have products or services that are actively good for the ocean.

Creating the first-ever Blue Carbon Calculator

We created a Blue Carbon Offset Calculator to build on our initial work through SeaGrass Grow – to provide charitable carbon offsets for individual donors, foundations, corporations, and events through the restoration and conservation of important coastal habitats that sequester and store carbon, including seagrass meadows, mangrove forests, and salt marshes. Soon after, we began working with Restore America's Estuaries to seek certification of our calculation methodology through Verified Carbon Standard. This certification would allow diverse organizations to purchase verified credits to offset their meetings and other activities.

Moving forward with a new decade of conservation

The Ocean Foundation celebrated its first full ten years of action, and strived to take even larger steps for coastal communities and marine conservation and restoration. We participated in events such as the Economist World Ocean Summit, published our first major peer-reviewed paper, hosted multiple ten-year celebrations, announced the creation of affinity group Friends of the Global Ocean Acidification Observing Network (GOA-ON) to contribute to the implementation of GOA-ON, honored Wolcott Henry on the completion of his board service, launched the Seascope Council to create a cadre of ambassadors for the ocean, announced the publication of a landmark blue carbon research synthesis report, and completed The Blue Carbon Offset Calculator's VCS certification.



Building capacity in Africa

We partnered with the U.S. Department of State, Heising-Simons Foundation, Schmidt Marine Technology Partners, and the XPRIZE Foundation to launch a public-private partnership, the "OceAn pH Research Integration and Collaboration in Africa" project, to advance ocean acidification monitoring in Mauritius, Mozambique, Seychelles, and South Africa. The groundbreaking workshop allowed scientists to learn about cutting-edge OA monitoring technology and facilitate connections to global efforts such as GOA-ON. All participants were linked to GOA-ON's Pier-2-Peer mentorship program.

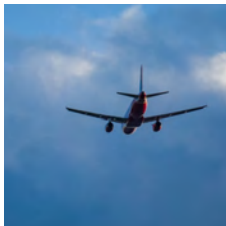
2012

2014

2016

2013

2015



Flying to clean beaches

We announced our unique partnership with JetBlue Airways, focusing on the long-term health of the Caribbean's beaches and ocean. The airline became the first travel company to tie nature's wellbeing in the Caribbean to its revenue. The study EcoEarnings: A Shore Thing sought to quantify both the risk and return to JetBlue from the region's natural attractions, linking the importance of clean, intact, and healthy beaches and shorelines to JetBlue's profitability in the Caribbean. This project was part of our developing portfolio on sustainable tourism, and years later, we utilized our expertise to host the Tourism Action Coalition for a Sustainable Ocean.

Solidifying a Sister Sanctuaries Agreement

Our ocean science diplomacy and Trilateral Initiative work, begun in 2007, and our engagement of scientists and government representatives from Cuba and the U.S. led to a groundbreaking sister sanctuaries agreement, matching United States marine sanctuaries with Cuban marine sanctuaries to collaborate on science, conservation and management of marine protected areas.





Garnering support for ocean acidification policy

Ocean acidification is an issue that transcends politics, impacting countries equally regardless of a country's carbon emissions. In December 2018, we received unanimous support at the Cartagena Convention's Protocol Concerning Specially Protected Areas and Wildlife meeting for a resolution to address OA as a concern for the Wider Caribbean Region. The Cartagena Convention has been ratified by 25 United Nations Member States, and covers the Gulf of Mexico, the Caribbean Sea and areas of the Atlantic Ocean. To get our recommendations adopted, we educated delegations and the Science and Technical Advisory Committee. The parties adopted the recommendation without amendment. Immediately after, the convention's hosting governments adopted the resolution in full.

Responding to the global pandemic: Strength in numbers

In response to the devastation caused by the COVID-19 global pandemic, our partners at World Central Kitchen (WCK), Keep Loreto Magical (KLM), and BeeSure went above and beyond to support and lift up communities. By July 2021, WCK provided a total of 20 million meals to over 2,000 unique locations around the world. KLM launched a Facebook group with over 15,000 members of all locally owned businesses in Loreto who had the ability to take orders and deliver food to local residents, as well as other products and services. And, BeeSure produced and donated over 50,000 pairs of gloves to healthcare facilities in the San Francisco Bay area.



2017 2018 2019 2020 2021

Creating RedGolfo

Since 2007, marine scientists from Cuba, Mexico, and the U.S. have met regularly as part of the Trinational Initiative. Perseverance with our Trinational Initiative led to the creation of the Gulf of Mexico Marine Protected Area Network, or RedGolfo, in 2017 when Mexico officially joined – making this a truly Gulf wide effort. RedGolfo provides a platform to help marine protected area managers share data and information to better prepare for and respond to changes and threats.

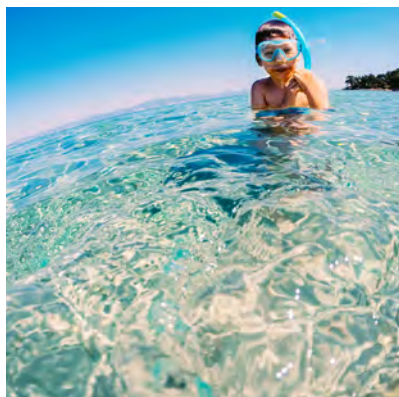


Bringing our expertise to the plastic pollution discussion

The Ocean Foundation officially launched our Redesigning Plastics Initiative, working to shift the conversation from why plastic has become so problematic as harmful pollution, to how plastic is being made and what it brings to society. Our Redesigning Plastics Initiative works to develop and synthesize original science to inform legislative approaches to change the way plastics are made – seeking to make it less toxic, less complex, and more recyclable.

Setting up our flagship blue carbon project in Puerto Rico

Ten years after our Blue Resilience Initiative launched, The Jobos Bay National Estuarine Research Reserve (JBNERR)'s mangrove forests were heavily disturbed by Hurricane Maria. We headed to Jobos Bay in 2018 to set up a mangrove restoration pilot project with partners at JBNERR and Puerto Rico DNER. The project was completed in 2020, and in 2021 we secured permits from the Army Corps of Engineers to restore up to 100 acres across Jobos Bay in the coming years. With financial support from the Philadelphia Eagles, we also initiated a 6.5-acre seagrass restoration project at Mata Redonda near JBNERR. While seagrasses and mangroves take years to grow, this project is swiftly becoming one of the largest blue carbon projects in the U.S. and Caribbean region.



Ramping up key initiatives

Continuing our involvement in the global plastic pollution discussion, we attended the Fifth Session of the United Nations Environment Assembly (UNEA 5.2) in Nairobi. Having been awarded accreditation as a non-governmental Observer to the United Nations Environment Programme, we were able to actively participate in the negotiations of a new mandate and begin formal discussions of a plastic pollution treaty. And on June 8th, we officially launched our Community Ocean Engagement Global Initiative to fill diversity, equity, inclusion, and justice gaps in ocean literacy around the world.

2022

As we celebrate our 20th year, we're reflecting on the fact that we've facilitated a total of \$84.1M for the ocean. We're currently hosting 55 projects across more than 25 countries. And, we aren't stopping there. At The Ocean Foundation, we know we have a long way to go to protect the coasts and ocean and those communities living alongside it. But the past 20 years has proven that when we work together, we can develop extraordinary solutions to global ocean threats.

CONSERVATION INITIATIVES

Throughout our 20 years of work, we have launched our own initiatives to fill gaps in conservation work and build lasting relationships.

These core ocean conservation initiatives provide leading contributions to the global ocean conservation dialogue on the topics of ocean acidification, ocean literacy, blue carbon, and plastic pollution.





INTRODUCING OUR NEWEST INITIATIVE

COMMUNITY OCEAN ENGAGEMENT GLOBAL INITIATIVE

Access to ocean literacy as a field of study and a viable career pathway has historically been inequitable. That's why, as a community foundation, we sought to fill this gap and create an initiative specifically targeting marine education.

To properly celebrate the newest addition to our marine conservation efforts, we officially launched the **Community Ocean Engagement Global Initiative (COEGI)** this June on World Ocean Day. In conjunction with our other initiatives, COEGI supports the development of marine education community leaders and empowers students of all ages to translate ocean literacy into conservation action.

Our vision is to create equitable access to marine education programs and careers around the world. Community engagement, capacity building, and education have been pillars of The Ocean Foundation's work for the past two decades. In the next 20 years, we hope to see marine education grow as a more effective, inclusive, and viable tool for ocean conservation and workforce development.

Laying the Groundwork in COEGI's First Year

We hit the ground running with a listening, learning, and research-oriented approach. Frances Lang, COEGI Program Officer, has spearheaded the launch of this initiative by drawing on her background as a marine educator and program leader for one of our fiscally sponsored projects, Ocean Connectors. This has involved a multi-layered strategy including virtual learning, curriculum development, mentorship, and public education.

The virtual learning component of COEGI has centered around AquaOptimism, a new, integrated online learning platform designed to inspire young minds around STEM innovation and promote stewardship of ocean and freshwater resources. The curriculum was designed by experienced educators and our partners at **TMA BlueTech**, a California-based regional nonprofit focused on promoting sustainable science-based ocean and water industries.

Together, we are working to embed marine science and blue technology career exploration into local schools – which will serve as a model for future replication throughout the U.S. and internationally. We all stand to benefit from increased science inquiry in public schools, leading to generations who are equipped to tackle the most pressing ocean, water, and climate challenges.

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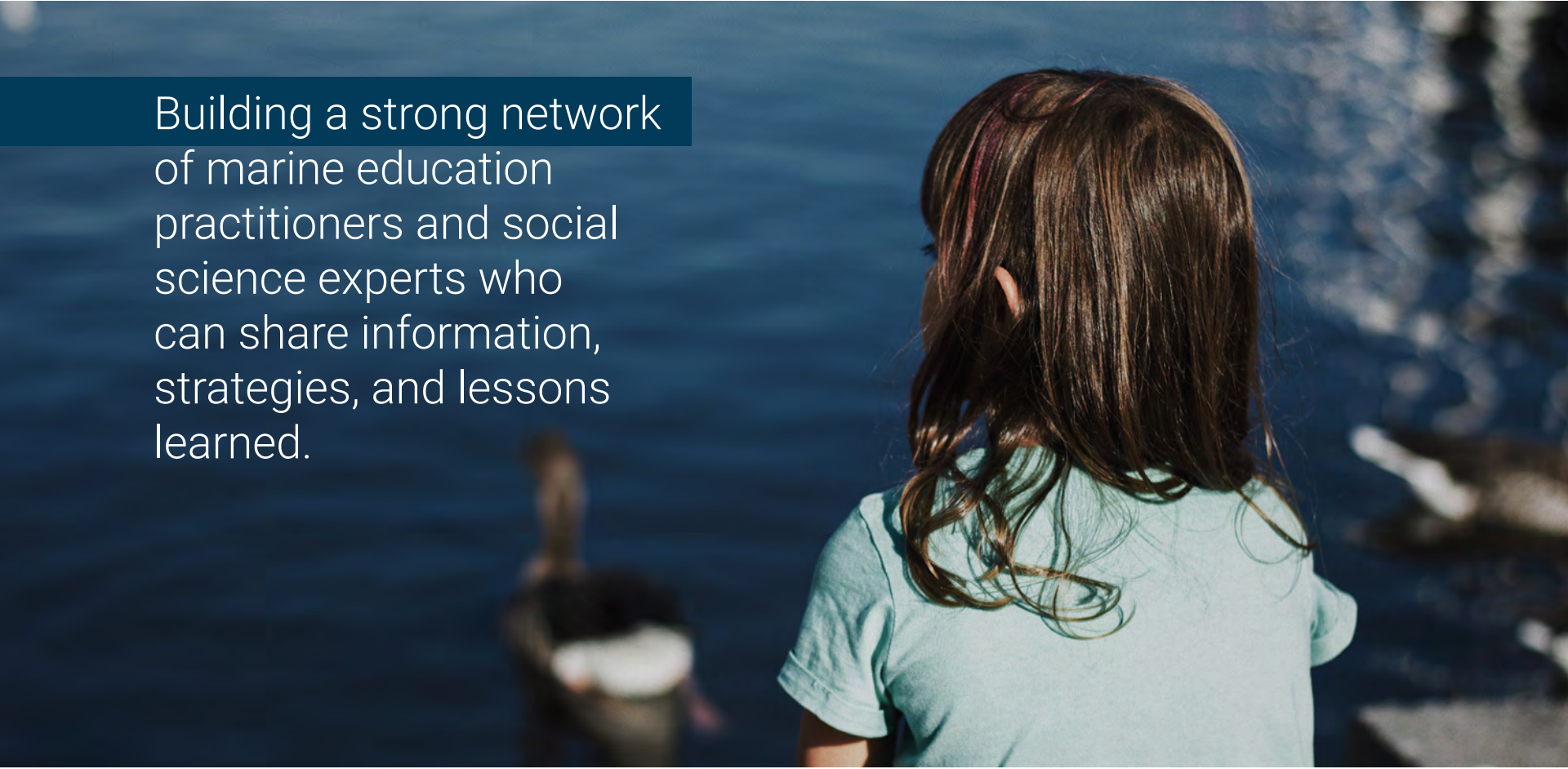
Partnering with Pier2Peer

Pier2Peer, a scientific mentorship program focused on ocean acidification, matches senior researchers with early career scientists to share expertise.

We have had a longstanding partnership with Pier2Peer through our International Ocean Acidification Initiative. Because COEGI and Pier2Peer both rely on international mentorship pairings to promote knowledge sharing and community building, we saw a further

opportunity to share resources, improve efficiency, and increase progress towards ocean health goals.

COEGI is recruiting mentors from diverse backgrounds to match with mentees – to build a strong network of marine education practitioners and social science experts who can share information, strategies, and lessons learned.



Building a strong network of marine education practitioners and social science experts who can share information, strategies, and lessons learned.



Marine Educator Community Needs Assessment

Marine education should reflect the broad array of coastal and ocean perspectives, values, voices, and cultures that exist around the world. We are conducting surveys and interviews to gain a better understanding of the processes that support workforce development for marine educators, as well as the barriers that may hinder advancement in this field.

Initially, we are focused on coastal communities in Puerto Rico, Cuba, Mexico, and the wider Caribbean region who feel the disproportionate effects of climate change and have a more direct relationship to and reliance on the ocean. Using information gathered from the needs assessment, we can tailor our work to advance our practices around ocean literacy and build marine education capacity. This includes establishing a network to connect educators across disciplines, training marine educators in behavior change and strategic communications, providing early career marine educators with job preparation resources, and working with local stakeholders to create more job opportunities.

We believe individual action makes a difference. If more marine educators are trained to teach audiences of all ages about the ocean's influence on us and our influence on the ocean – in a way that inspires behavior change – society as a whole will be better equipped to protect our ocean.



BUILDING ON OUR PLASTIC POLLUTION EFFORTS

REDESIGNING PLASTICS INITIATIVE

The diverse ecosystems in the ocean are strongly interconnected with society and our daily lives. Though plastic has been around since the 1940s, it has become a widespread issue due to its long life cycle combined with negative damage to the environment. Not only does plastic pollution affect the health of aquatic ecosystems and its species, but it also affects human health and those who rely on these marine environments.

Currently, about 90% of plastic produced is not or cannot be recycled. This makes sustainability intangible due in large part to the design of current plastic products, resulting in common one-use plastics. While plastic serves a relevant purpose in packaging, engineering, medical protection, transportation, and sanitation, we need to shift towards designing plastics products to be less complex and toxic so they can be reusable and/or recyclable – to create a more circular economy.

We created our **Redesigning Plastics Initiative (RPI)** to work with government entities, corporations, the scientific community, and alongside global advocates and philanthropists to address the plastic pollution problem from multiple angles. Ultimately, we aim to support actions and policies that will change the way plastic and plastic products are made, so they can be used with less harm to human and environmental health.

After two years of work in this initiative, we welcomed our new RPI Program Officer, Erica Nuñez. Erica hit the ground running in her first year, using her background in international governance and policy, and plastic pollution issues, with her U.S. government and nonprofit experience to build RPI's reach and influence. She has taken The Ocean Foundation one step further from problem-focused pollution management towards solution-based prevention and conservation.

RPI: A Year in Review

Meetings and Presentations



September 1 - 2, 2021

Ministerial Conference on Marine Litter and Plastic Pollution

Continuing to advance our priority to engage in support of a global treaty on plastic, we attended the **Ministerial Conference on Marine Litter and Plastic Pollution** hosted by the governments of Ghana, Ecuador, Germany and Vietnam. The goal of this government-led conference was to build momentum and political will towards advancing a global strategy to address plastic pollution at the United Nations Environment Assembly (UNEA 5.2) in February 2022.

September 3 - 11, 2021

International Union for Conservation of Nature (IUCN) World Conservation Congress

TOF President, Mark J. Spalding, and RPI Program Officer, Erica Nuñez, **presented about** cohesive efforts towards environmental governance as well as the benefits and importance of ocean conservation implementations.

October 21, 2021

Plastic Health Summit

We virtually attended the **Plastic Health Summit** organized by the Plastic Soup Foundation, highlighting the scientific discoveries regarding plastic pollution and its several effects on humans, animals, and the environment.

February 28 - March 2, 2022

UNEA 5.2

We attended the **5th Session of the United Nations Environment Assembly** in Nairobi as an accredited non-governmental Observer to UNEP, participating in several discussions including the negotiations on the mandate to develop a plastic pollution treaty.



PHOTO © WORLD PLASTIC SUMMIT INSTAGRAM



PHOTO © WASTE360

March 24 - 26, 2022

World Plastics Summit

We attended the first annual **World Plastics Summit** in Monaco as the only international policy representative, where research regarding plastics recycling and redesign was used in collaboration to work towards future solutions.

April 7 - 8, 2022

Forum on Trade, Environment & the SDGs (TESS), Global Governance Centre, and Geneva Environment Network

Program Officer Erica Nuñez **spoke on** the panel “Next Steps on the Plastic Pollution Treaty”, discussing the wide range of challenges as we begin negotiating a plastic pollution treaty.

Global Plastic Policy Centre - Policy Review Workshop

We attended a policy review workshop hosted by the University of Portsmouth’s **Global Plastic Policy Centre**, examining the success of plastic pollution policies worldwide identified in their draft report.

April 28, 2022

Embassy of Norway Plastics Event

The Ocean Foundation and the Norwegian Embassy in Washington, D.C. convened leaders across government, civil society, and industry to explore what a new global plastics treaty means for reducing plastic pollution worldwide. President Mark J. Spalding and Program Officer Erica Nuñez participated in this panel and we debuted our new RPI **project video**.

May 9 - 12, 2022

Waste Expo

Program Officer Erica Nuñez attended the **Waste Expo**, and was a speaker for the panel: Waste360 “Sustainability Talks: Global Plastics Treaty”, where she discussed the critical role of waste pickers globally – and opportunities domestically – around the global plastics treaty.



GreenBiz



May 17 - 19, 2022

Greenbiz Circular City 22

We attended the Greenbiz Circular City 22 in Atlanta, where Program Officer Erica Nuñez spoke on the panel, “Advancing A Global Plastics Treaty”, with prominent experts in the field about the current plan for the global plastics treaty in a packed room of stakeholders.



May 23 - 27, 2022

2nd Annual International African Marine Waste Network Conference

Program Officer Erica Nuñez attended the Sustainable Seas Trust African Marine Waste Network Conference. She served as moderator for “Plenary Session on solutions to plastic pollution” and served as panelist on the “Panel Discussion on Policy and Legislation”. The conference focused on addressing necessary actions regarding the plastics value chain in Africa, where they are striving to move towards a zero plastics environment.



MICROFIBER
INNOVATION
CHALLENGE



MICROFIBER
INNOVATION
CHALLENGE
POWERED BY:
CONSERVATION X LABS

June 16, 2022

Conservation X Labs Innovation Summit

We attended the Conservation X Labs Innovation Summit, where the winners of the 2022 Microfiber Innovation Challenge were recognized.



UNITED NATIONS
OCEAN
CONFERENCE



June 27 - July 1, 2022

United Nations Ocean Conference

We attended the 2022 [United Nations Ocean Conference](#) in Lisbon in support of research and policy regarding solutions to plastic pollution. Program Officer Erica Nuñez served as moderator for the panel: “Microplastics and Our Ocean’s Health” and also served as a speaker for IUCN’s “A Post Plastic World”.



Journeying Towards a Global Plastics Treaty

Despite plastic pollution being a worldwide crisis, no universal treaty has ever existed to address it. Regional, country, state, and municipal standards and regulations vary, and these differing views have mostly focused on plastic as a waste management issue. Then, in 2015 came a report from a group of scientific experts – led by award-winning researcher and professor at the University of Georgia’s College of Engineering, Dr. Jenna Jambeck. This pivotal piece on plastic pollution made it clear that waste management alone won’t make enough of a dent in curbing the plastic crisis.

Since then, governments, organizations, corporations, and the general public have increasingly rallied around addressing the entire plastics value chain. And recently, this momentum reached a critical, global mass – with leading businesses and financial institutions also calling for a legally binding treaty on plastic pollution. Around the world, we now understand how to divert towards circular plastic solutions. The puzzle pieces for a circular economy exist – a global plastics treaty can ensure that they fall in the right place.

For the last 20 years, The Ocean Foundation has been involved in international negotiations on ocean and climate issues. We know that garnering agreement among governments, industry, and environmental nonprofits takes years, and not all organizations are able to be in the right rooms. So, as an accredited Civil Society Observer, we aspire to be a voice for those who share our perspectives in the fight against plastic pollution.

We have been deeply involved in the ongoing discussion of supporting the development of a global plastics treaty, and our Program Officer Erica Nuñez has participated in several panels surrounding the possible terms and goals. With the acknowledgement of governments that plastic pollution is a threat to the environment and human health and the global agreement at UNEA 5.2 to approve a mandate to begin negotiations for a treaty on plastic pollution, we hope to see the flow of plastic waste into the environment slowed to a stop. Topics such as plastic pollution’s correlation with climate change, key targets, diverse factors, and implementation strategies are at the heart of current debates.

Ministerial Conference on Marine Litter and Plastic Pollution

To advance our engagement in support of a global treaty on plastic, we attended the Ministerial Conference on Marine Litter and Plastic Pollution in September, 2021. Hosted by the governments of Ghana, Ecuador, Germany, and Vietnam, this two-day conference built on the momentum of various international discussions to make concrete suggestions to address plastic pollution at the Fifth Session of the United Nations Environment Assembly (UNEA 5.2) – in February, 2022. Government officials endorsed a Ministerial Statement at the conference signaling their commitment to support the establishment of an Intergovernmental Negotiating Committee at UNEA 5.2.

The statement, endorsed by 72 countries, identifies the problem of marine litter and plastic pollution – fueled by unsustainable production and consumption – and highlights the need to design plastic in a way that reduces waste and pollution and addresses the risks to human health and the environment.

UNEA 5.2

Continuing our involvement in the discussions for a global plastic treaty, we attended the Fifth Session of the United Nations Environment Assembly (UNEA 5.2) held in Nairobi. Since becoming an accredited non-governmental Observer to the United Nations Environment Programme (UNEP), we were able to attend and actively participate in the negotiations for a new mandate. The approval of the mandate by governments now allows for formal negotiations for a plastic pollution treaty to begin in late 2022.

We were a key member to a coalition made up of various representatives from NGOs from across the globe that worked together to pursue common goals during UNEA 5.2. The priorities discussed at UNEA included the implementation of a circular economy, the recognition of the critical role waste pickers play in reducing the amount of plastic pollution in the environment, ensuring a life cycle approach to addressing plastic pollution, progress in sustainable production and consumption, and the product design of plastic products.

While we were in Nairobi, RPI also met with representatives from national governments and industry regarding priorities for the ongoing policy negotiations. After returning from UNEA, we were pleased that the U.S. Senate released a joint statement addressing plastic pollution and the negotiations that took place at UNEA.



World Plastic Summit

We came together with plastic-focused research leaders in biology, chemistry, engineering, environmental science, material science, and sustainability from across the globe at the first annual World Plastics Summit in Monaco. The focus of this meeting was “fostering global collaboration to accelerate plastics recycling and redesign”. As the only international policy perspective present, we were able to offer a unique point of view and share insights that played a key role in discussions pertaining to the upcoming treaty negotiations.

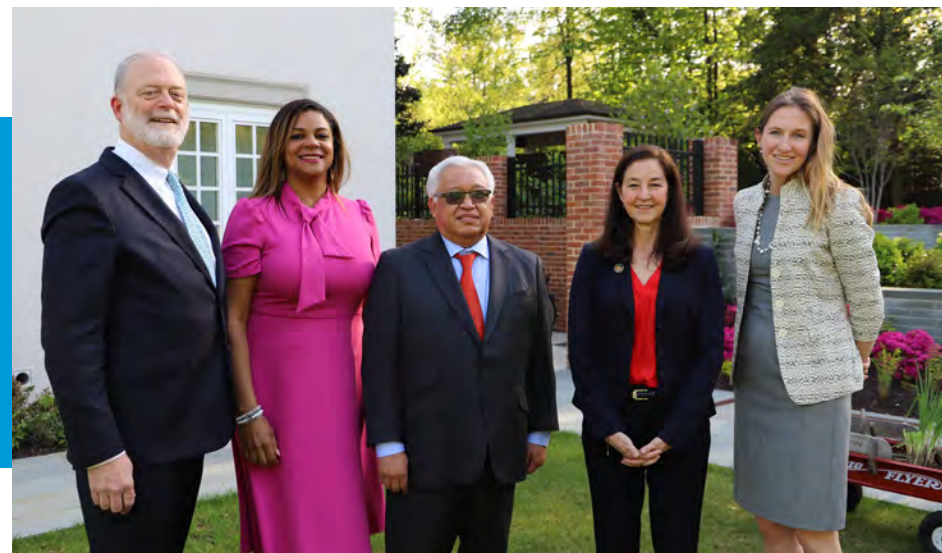
RPI representatives formed connections with leaders in plastic redesign and polymer science who we hope to explore further relationships with down the road. We also had the opportunity to meet with personnel from the International Atomic Energy Agency (IAEA) and tour their facility – where they are working on a new project to utilize their in-house technology for recycling and monitoring the marine impact of plastic pollution. We are excited about this connection and any potential opportunities for collaboration in the future.



Embassy of Norway Plastics Event

To further discuss the wide range of opportunities a global plastics treaty would provide, we worked with the Embassy of Norway to convene leaders across government, civil society, and industry. This April, we held a Plastics event at the Norwegian Embassy in D.C. where our President Mark J. Spalding served as the master of ceremonies, and Program Officer Erica Nuñez spoke about the implications of the progress made at UNEA 5.2 as well as the benefits of reducing plastic pollution. We were able to connect the political, industrial, and societal aspects of the proposed treaty through the diverse group of members in attendance. Here, we also debuted our newest project video highlighting what RPI is all about. Attendees were able to meet and hear from the U.S. Norwegian Ambassador and a U.S. Assistant Secretary of State, as well as many other speakers with a wide range of experiences and insight into plastic pollution.

Speakers at our Norway event included H.E. Anniken Krutnes, Norway's Ambassador to the U.S.; Monica Medina, Assistant Secretary for Oceans and International Environmental and Scientific Affairs for the U.S. Department of State; H.E. Gerald M. Zackios, Ambassador of the Republic of the Marshall Islands to the U.S.; Stephanie Potter, Sustainability Strategy and Corporate Affairs at Nestlé; and Mark J. Spalding and Erica Nuñez, President and Program Officer of Plastics from The Ocean Foundation.



In the three years of our Redesigning Plastics Initiative, in addition to becoming an accredited non-governmental Observer to UNEP and the Basel Convention on the Control of Transboundary Movements of Hazardous Waste and Their Disposal, we have also become a member and contributor to the following organizations dedicated to our cause.



BOTTLE Consortium:

The Ocean Foundation partners with the BOTTLE Consortium (Bio-Optimized Technologies to keep Thermoplastics out of Landfills and the Environment) to coordinate on advancing the science of polymers to make them recyclable by design, reducing plastic pollution.



Ocean Plastic Leadership Network:

The Ocean Foundation is a member of The Ocean Plastic Leadership Network, where we can connect with a diverse group on the issues related to global plastics policy governance.



ClientEarth:

The Ocean Foundation partnered with ClientEarth to address chemical pollution from plastics and additives, and their effects on human health.



OneSource Coalition:

The Ocean Foundation joined the OneSource Coalition to help pursue policies in favor of producer accountability, environmental justice, and international leadership in the advancing of a circular economy for plastics.



Conservation X Labs:

Conservation X Labs hosts a Microfiber Innovation Challenge each year, challenging those who enter to find new ways to protect our environment. The Ocean Foundation has partnered with them on this project to expand its potential effectiveness over time.



Sustainable Seas Trust (SST):

The Ocean Foundation has a memorandum of understanding (MOU) with SST, a science-based organization that works to protect Africa's marine resources.



InMarEST Ocean Plastics Special Interest Group:

The Ocean Foundation became an active member in the InMarEST Ocean Plastics Special Interest Group, where we are working with other members on stakeholder engagement regarding ocean governance.



U.S. Plastics Pact:

The Ocean Foundation is a key contributor to the U.S. Plastics Pact. We are working with a diverse group of public and private stakeholders to advance solutions in plastic pollution as we work towards the ultimate goal of a circular economy in the United States.



EQUIPPING SCIENTISTS AND COMMUNITIES

INTERNATIONAL OCEAN ACIDIFICATION INITIATIVE

There is a lot we still don't know about the ocean. What we do know is that the ocean is intimately affected by — and affects — the balance of carbon dioxide on our planet. And ocean acidification (OA) is one little-known yet wide reaching effect of increasing carbon dioxide levels in our atmosphere.

Across the globe, ocean chemistry is changing faster than at any time in history. As the ocean becomes more acidic, marine life can't easily contend with these rapid changes. And, neither can the communities that depend on these resources.

Building the capacity to track, understand, and respond to ocean chemistry changes is critical to adapt to OA. Since 2003, our **International Ocean Acidification Initiative (IOAI)** has fostered innovation and partnerships to support scientists, policymakers, and communities around the world. Through the IOAI, we help build the science, policy, and technical capacity of practitioners worldwide and in their home countries.

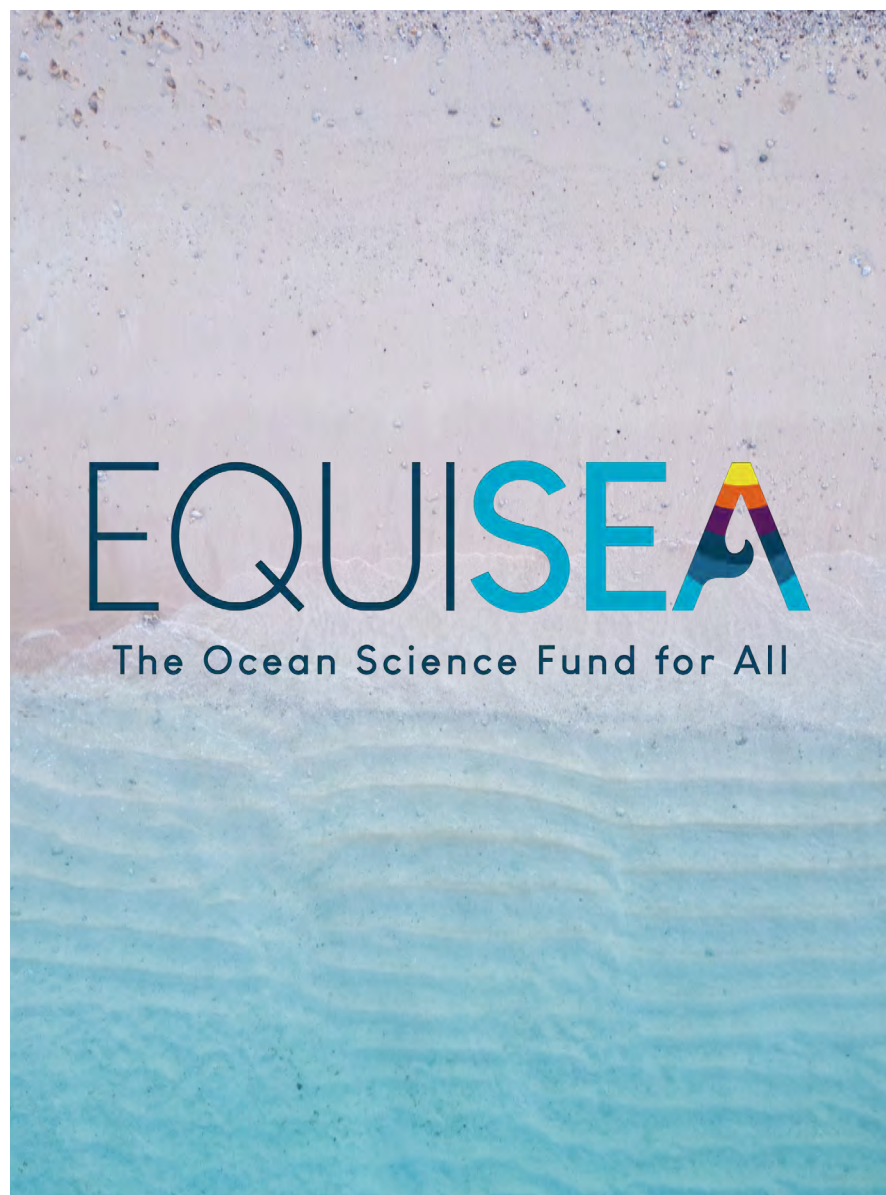
Over the past 20 years, The Ocean Foundation has worked to ensure that all countries, communities, and scientists have the ability to understand and respond to ocean acidification – not just those with the most resources.

Now, as we enter our 21st year, we are expanding our work. Ocean science capacity as a whole is inequitably distributed around the world – this isn't just the case for ocean acidification research. To address these inequalities throughout the ocean science community, we are committed to providing the resources needed to expand human, technical, and physical ocean science infrastructure.

Inviting Conversations around Equity and Representation

Rapidly changing environments require widely and equitably distributed human, technical, and physical science infrastructure. Yet, technology development has traditionally been driven by wealthy institutions and limited to well-funded nations, leaving regions without the capacity to collect scientific data to be underrepresented in international policy and management decisions.

Our new funder collaborative, **EquiSea**, builds off of the work of IOAI to address systemic inequities in ocean science capacity. EquiSea was co-designed over more than two years through consensus-based stakeholder discussion, with more than 200 scientists from around the world. This past year, EquiSea sought to amplify the message that ocean science capacity should be equitably distributed – by hosting presentations and panels at several conferences.



Harnessing Global Ideas for Equitable Capacity Building in the Geosciences

EQUISEA AGU TOWN HALL DISCUSSION | 2021

In December 2021, we led an interactive Town Hall in New Orleans with a widespread virtual component, bringing together international audiences from various disciplines in geosciences to talk about common barriers, solutions that have increased research capacity, and our path forward. The Town Hall was led by EquiSea co-lead and TOF Program Officer Alexis Valauri-Orton, with EquiSea co-lead and OA Researcher at the University of Ghana Dr. Edem Mahu on the panel.

Global Capacity Development in Ocean Sciences for Sustainable Development

EQUISEA AT THE OCEAN SCIENCES MEETING | 2022

During this year's **Ocean Sciences Meeting**, held virtually from February 24 to March 4, we supported four presentations stemming from IOAI and EquiSea. One presentation was led by Marcia Creary Ford, researcher at the University of West Indies and an EquiSea co-lead. She spoke about how EquiSea aims to improve equity in ocean science – starting with regional level needs assessments and followed by teeing up commitments from governments and private sectors.

“ I believe that if we can strengthen the capacity right where it is needed, working with the people right from the grassroots, right from where the problem is, then... this kind of capacity can indeed make an impact in the society.

Dr. Edem Mahu

OA Researcher, EquiSea Co-lead



Providing Accessible Tools

The ocean is changing, but what does that mean for the species that call it home? And, how do we respond to the harms we will feel as a result?

In 2009, oyster growers along the United States' west coast experienced massive die offs in their hatcheries and natural brood stock, a consequence of the region's already-low pH waters and ongoing acidification.

To combat the effects of OA on their industry, some hatcheries installed state-of-the-art water chemistry monitoring systems. But, in many regions around the globe, shellfish farms that provide food and jobs don't have the same access to these tools.

pCO₂ to Go Kits

Our response was to partner with Dr. Burke Hales – a chemical oceanographer known world-wide for creating OA monitoring systems – to build a low-cost pCO₂ sensor, the pCO₂ to Go, that fits in the palm of a hand and provides instant readouts of the amount of dissolved carbon dioxide in seawater (pCO₂).

Unlike other handheld sensors, such as pH meters, the pCO₂ to Go produces results at the accuracy needed to measure important changes in ocean chemistry. With a few other easy measurements, hatcheries can learn what their young shellfish are experiencing in real time and take action in just a few minutes. With the included app-based software, staff can calculate how much of a few reagents to mix

into their seawater to bring it back to conditions that are more ideal for building shells.

The 2022 Ocean Sciences Meeting was the first time we showcased our new sensor, and highlighted its use in coastal environments. We're continuing to test the pCO₂ to Go with partners at the [Alutiiq Pride Marine Institute](#), and plan to deploy kits at hatcheries worldwide – providing a cost-effective way for vulnerable shellfish industries to continue producing young shellfish despite ongoing acidification.



Supporting Local Leadership

In the Pacific Islands

Addressing changing ocean conditions requires sustained, locally managed research programs. In partnership with the National Oceanic and Atmospheric Administration – and with support from the U.S. Department of State – we launched a program to build capacity for addressing ocean acidification in the Pacific Islands.

To ensure long term and local leadership, we released a call for proposals to establish a permanent regional training center. The new center, the Pacific Islands Ocean Acidification Centre (PIOAC), is located in Suva, Fiji. This Centre is a joint endeavor led by the Pacific Community, the University of the South Pacific, the University of Otago, and the New Zealand National Institute of Water and Atmospheric Research.

PIOAC is a permanent resource – staffed and based locally – that provides online and in-person training, equipment provision, training instruments, a spare parts inventory, and additional educational opportunities for those across the region. Most importantly, the training center helps increase overall resilience to OA throughout the tropical Pacific.

In addition to establishing the PIOAC, The Ocean Foundation worked to provide training on ocean acidification to scientists, managers, and practitioners in the Pacific Islands. Together with the PIOAC and NOAA, and in partnership with IOC-UNESCO's **OceanTeacher Global Academy**, we led an online training course for 248 participants from across the Pacific Islands.



From February to April 2022, scientists, government representatives, students, and individuals of all backgrounds dove into the science behind our ocean's changing chemistry and were equipped with key data management and usage practices from global experts. Discussion fora and live Question & Answer sessions deepened participants' understanding and allowed them to hone in on topics of most interest to them.

With a focus on providing a diverse group of people the tools to understand and respond to OA, our course started with an introduction before digging deeper into the complex methodologies of carrying out research. Those who completed the full course had the opportunity to apply for a monitoring equipment kit and continue with hands-on training at PIOAC next year, which will allow them to initialize their own OA research and contribute to global datasets.

The results of this first online course made it abundantly clear that those who call the coasts their home could bring this material into their lives and work. In the coming year, our Initiative will distribute kits to those selected who completed the course, and continue to provide support to the PIOAC to enable training, sensor maintenance, and spare parts inventories. The Ocean Foundation will also host an in person technical training for new kit recipients at the PIOAC.

“ Learning more about ocean acidification will allow me to further encourage public education for my community so that they understand the causes and preventions they can practice to mitigate the issue, especially here in the Pacific Islands.

- TRAINING PARTICIPANT

“ As an islander and a daughter of a long time fisherman, seafood is my main source of protein. It is important for me to learn how ocean acidification impacts our seafood as well as how to minimize the impact.

- TRAINING PARTICIPANT

OUR PARTNERS WHO HELPED RUN THIS COURSE



Pacific
Community
Communauté
du Pacifique



In Western Africa

When The Ocean Foundation helped teach an OA mini course in 2020 for the **Coastal Ocean Ecosystem Summer School** in Ghana (COESSING), we gained a new partner in OA Researcher Dr. Edem Mahu – who also leads Building Capacity in Ocean Acidification Monitoring in the Gulf of Guinea (BIOTTA).

This year, we continued to partner with BIOTTA and coordinate with the five focal points from each of the countries in this project. We provided financial support to each focal point and shared examples of how we have

supported regional capacity development on OA. We also co-led a session during COESSING to introduce the BIOTTA project, provide an overview of OA research in the Gulf of Guinea, and share how to get involved in monitoring. More than 25 attendees from West African countries filled out a survey after the event to learn more about the BIOTTA project. We are in the process of cataloging the scientific and management capacity to address OA in each country, and aim to launch an online training next year similar to the training held for the Pacific Islands.

OUR FOCAL POINTS

BENIN
COTE D'IVOIRE
CAMEROON
GHANA
NIGERIA

Through Pier2Peer Mentorship

Throughout the year, The Ocean Foundation continued our partnership with GOA-ON's scientific mentorship program, **Pier2Peer**, by awarding grants to mentor and mentee pairs – supporting tangible gains in technical capacity, cooperation, and knowledge. Natalie Bravo, a Fisheries Biologist at the Pedro Ruiz Gallo National University in Peru, received a grant with mentor Dr. Christina McGraw of the University of Otago in New Zealand to study the effects of coastal ocean acidification and hypoxia on the scallop *Argopecten purpuratus*. Ms. Bravo attended our 2019 OA workshop in Colombia, and is now a member of the Latin American Ocean Acidification Network.

Additionally, Ana Veronica García Condo from Ecuador, now completing her Master's in Belgium, was funded with mentor Dr. Sam Dupont to determine the effects of acidification on Galapagos sea urchin embryos and larvae. Dr. Natalia Servetto of the National University of Cordoba in Argentina was awarded a grant to carry out carbonate chemistry measurements from Antarctic water samples in France, with the expertise and instrumentation of her mentor Dr. Frédéric Gazeau.

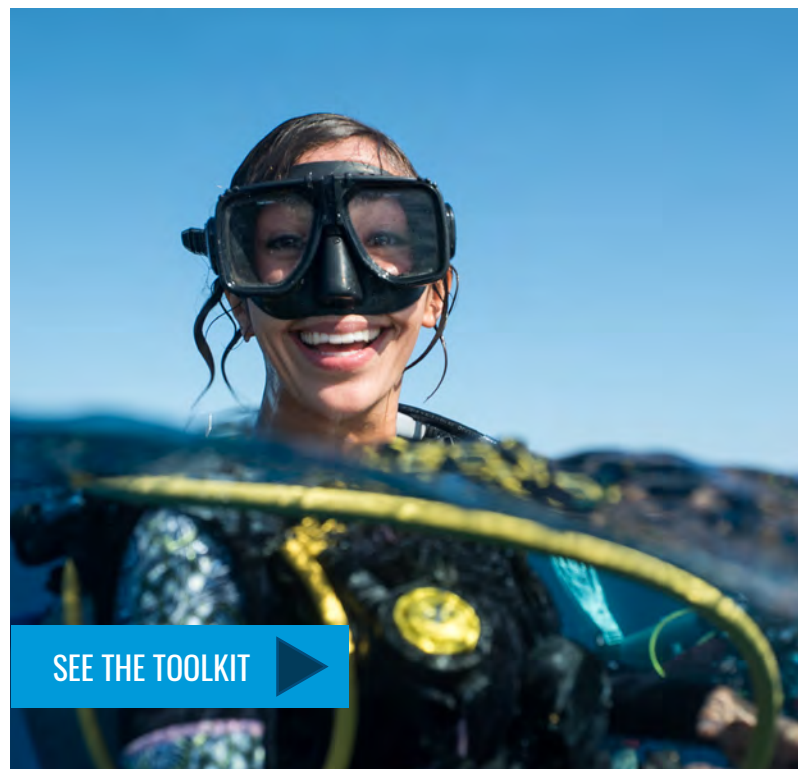


Bridging the Gap Between Science and Policy

Our 4th Annual Ocean Acidification Day of Action

Due to the ongoing pandemic, we took a digital approach for this year's **OA Day of Action** on January 8 (or 8.1, the current average ocean surface pH), working to spotlight the communities and partners who have helped us make colossal strides towards monitoring and combating ocean acidification.

With a press release and key messaging, we provided an **online toolkit** for partners and organizations to participate and engage with their own audiences. Over 50 social media posts were created as a result of this kit, generating excitement for the premiere of our newest IOAI project video. And, partners – such as Jessie Turner at the International Alliance to Combat Ocean Acidification (OA Alliance) – shared their own videos to further celebrate their sense of pride in the OA community.



COP26

The 26th Conference of the Parties of The UN Framework Convention on Climate Change in Glasgow (COP26), from October 31 to November 12, 2021, brought together 120 world leaders and over 40,000 registered participants to discuss all facets of climate change. On IOAI's part, we worked to bring the ocean – and its connection to our climate – to the forefront of discussions.

In partnership with OA Alliance, we hosted the online event "Workshop on Climate, Biodiversity, and Marine Protection in Latin America" ahead of COP26 in October. With speakers ranging from an Ambassador to leaders of the Latin American Ocean Acidification Network, the

event summarized high-level commitments for ocean-climate action made in Latin America, updates from regional science and monitoring networks, and a synthesis of policy frameworks and management strategies related to coastal and marine protection.

On November 5th, we joined One Ocean Hub and the OA Alliance to co-host "Exploring Law and Policy Strategies and Frameworks to Address Climate-Related Ocean Change" on UNFCCC COP26 Climate Law and Governance Day. The panel brought marine and climate experts together to discuss policy strategies for addressing climate change's effects on marine life.

Vulnerability Assessment in Puerto Rico

As ocean conditions around Puerto Rico continue to change drastically with time, we partnered with University of Hawai'i (UH) and Puerto Rico Sea Grant (PRSG) to lead a vulnerability assessment project. By connecting socioeconomic and ecological vulnerabilities in Puerto Rico to the state of changing ocean chemistry, we can better understand the full picture, work with local communities to more effectively address issues, and create a road map for governments to invest in additional OA research, mitigation, and adaptation strategies.

Co-Principal Investigator Dr. Melissa Meléndez has been working on a scientific synthesis to understand what is known about OA around the archipelago, and The Ocean Foundation and PRSG interviewed stakeholders to understand their perception of the issue. This is the first NOAA Ocean Acidification Program-funded

regional vulnerability assessment to focus on a U.S. territory, and will stand out as an example for future efforts.

We were also proud to have had Idamis Rodríguez Nazario, Nias Hernández Motocourt, and Dylan J. Álvarez Ramos as our local paid student interns helping with this project. After recently completing OA and social studies training with staff from The Ocean Foundation, UH, and PRSG, they have launched into work that will expand our knowledge through interviewing key stakeholders including fishers, governmental resource managers, and those in the tourism industry. Once this information is synthesized, they will help share the information back to the community in Puerto Rico, increasing our understanding of the direct effects of OA to important marine resources and livelihoods.

OUR PUERTO RICO INTERNS



Dylan Álvarez Ramos



Nias Hernández Montcourt



Idamis Rodríguez Nazario



CONSERVING AND RESTORING COASTAL ECOSYSTEMS

BLUE RESILIENCE INITIATIVE

The ocean helps protect us from the worst of climate change. It mitigates weather extremes, generates oxygen, and produces much of the food we eat. And, it is one of our greatest solutions for nature-based carbon capture and storage. But the ocean also bears the brunt of climate change, and is already experiencing its wrath. As a result, coastal ecosystems — and the communities that depend on them — are at risk.

The good news is our most crucial ecosystems can recover if we provide them with healthier conditions. Since 2008, our **Blue Resilience Initiative (BRI)** has supported coastal community resilience by restoring and conserving coastal habitats. We also reduce stressors to environments and improve local food security through innovative regenerative agriculture and agroforestry approaches.

Using the lens of the ocean-climate nexus, we maintain the inextricable link between climate change and the ocean by advancing nature-based solutions. We take a “ridge-to-reef”, or “seascape” approach, embracing the myriad of connections between habitats to preserve coastal ecosystems that support shoreline protection, provide diverse habitats, filter pollution, and sustain local communities who face the greatest climate threats.

We have been restoring abundance and enhancing productivity of coastal ecosystems, so that, despite increased resource needs and climate threats, we can protect the ocean and our world.

Building Coastal Resilience in Mexico

Xcalak National Reef Park

Xcalak, located on the southern terminus of Costa Maya, is home to **Xcalak National Reef Park**: a conservation-focused marine protected area adjacent to expansive blue carbon ecosystems. While its mangroves are relatively pristine and far from the mass tourism centers of Cancún and the Mayan Riviera, there are many damaged areas caused by construction and major hurricanes. Further development threatens the region, and hurricanes are increasing in frequency and intensity. This leaves isolated indigenous communities to face

devastation with little government assistance.

To restore the hydrology of Xcalak's ecosystems and strengthen its natural integrity, we kicked off a large-scale, community-based habitat enhancement project in Xcalak to help its mangroves grow and flourish again. From May 2021 to 2022, we focused on gathering baseline data for what we predict will be a decade-long blue carbon effort in partnership with the Xcalak National Reef Park.



PHOTOS © BEN SCHEELK, IRVING LEONARDO CHAVEZ ESTRADA

In November 2021, we conducted a workshop for Xcalak community members to exchange restoration techniques and play key roles in future efforts. In January 2022, we completed a mangrove assessment to determine what and where future hydrological restoration interventions are required; identify the extent of living, dead, and unvegetated mangroves; and discover possible causes of their degradation. In the next year, we'll use our assessment to begin the implementation of our restoration and conservation plans.

Our project works directly with the local population – much of which is Mayan – to introduce nature-based solutions that are amenable to their lifestyle and informed by their cultural practices. We hope to engage Xcalakeños as citizen scientists and first responders by acknowledging their leadership in protecting the ecological integrity of their coastline. By enhancing stewardship, we can create a pathway for more small-scale, sustainable tourism to the area. And, we can provide sustainable livelihood alternatives that ensure coastlines are more resilient in the face of natural and anthropogenic threats.



In March 2022,
this project was awarded
Top Innovator
in the Blue Carbon Challenge hosted by
Friends of Ocean Action and UpLink.



**FEATURED
PARTNERS**



A \$1.9M Win for Caribbean Ecosystems

The Caribbean Biodiversity Fund

September 2021 marked an enormous win for The Ocean Foundation's work in the Caribbean: The Ocean Foundation and our Caribbean partners were awarded a major grant from the **Caribbean Biodiversity Fund** (CBF) to carry out nature-based solutions in the two largest island nations of the Caribbean: Cuba and the Dominican Republic (D.R.).

CBF's Ecosystem-based Adaptation (EbA) grant program focuses on projects that use biodiversity and ecosystem services to help coastal communities adapt to climate change, reduce disaster risk, and build resilient ecosystems. Over \$1.9 million was awarded to The Ocean Foundation and our partners, making it the largest single grant in organizational history.

Cuba and the D.R. share many coastal species and habitats impacted by climate change. Sea level rise, coral bleaching and disease, and an exponential increase in strandings from sargassum algae are threats for both nations. Through this project, both countries will share solutions proven to be most effective in the region. We are thrilled about this three-year effort, intended as an exchange between scientists, practitioners, the tourism sector, and governments. Through this grant, we were already able to make several projects possible – and greatly advance others.



Sargassum Insetting in the Dominican Republic, St. Kitts, and Beyond

We have already been advancing carbon insetting technology in the Caribbean to help local farmers and relieve pressure on coastal ecosystems from harmful sargassum blooms. And, with the help of CBF's grant, we have had incredible opportunities to continue this support.

In 2019, in partnership with **Grogenics**, we helped introduce sargassum-based carbon insetting, which repurposes harmful sargassum blooms into cost-effective organic compost. We established a groundbreaking partnership with **Marriott International**, who provided the seed funding for us to launch a pilot project in Miches, D.R.

Thanks to our pilot's success in Miches, we expanded our approach to St. Kitts and Nevis with **Montraville Farms**, Grogenics, and The St. Kitts Marriott Resort & The Royal Beach Casino.

Together, Grogenics introduced regenerative agriculture at a local St. Kitts Marriott hotel, where their property serves as the primary location for collecting and repurposing sargassum for a local farm.

This past year, our local team conducted its second and third pilot trials, where we used sargassum accumulated on Marriott beaches to conduct data. Both trials demonstrated the capacity of our approach to harvest our daily target volume: Throughout the trials, we determined two teams of five operators is optimal, transporting a minimum of 250 yd3 of sargassum per day.

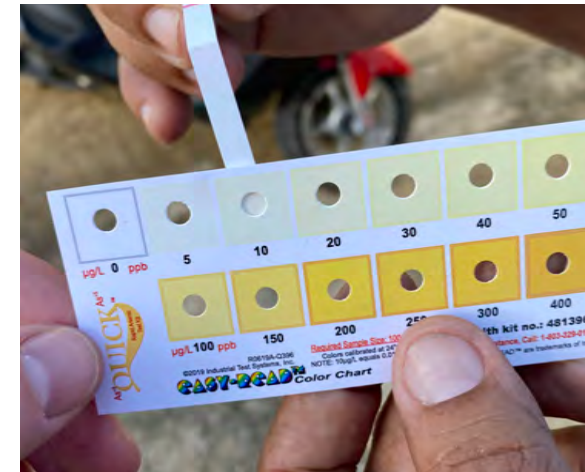
Because of our partnerships, donors, and the help of the CBF grant award, we can continue supporting these island communities and their local needs.



In June 2022,
this project was awarded

Top Innovator

in the Coastal Tourism Challenge hosted
by Friends of Ocean Action and UpLink.



**FEATURED
PARTNERS**

Grogenics

MONTRAVILLE FARMS

**Marriott
INTERNATIONAL**

**MARRIOTT RESORT
ST KITTS
THE ROYAL BEACH CASINO**

A New Brigade of Citizen Scientists in Cuba



Guanahacabibes National Park (GNP) is one of Cuba's largest and best-preserved marine protected areas. Located along the Yucatan Straits, GNP is an important migratory pathway for marine species and home to several coastal communities that depend on the park's habitats for sustainable fisheries, ecotourism, and storm protection. But not all is perfect, even in this remote corner of the Caribbean. Guanahacabibes Peninsula is one of the most exposed areas to hurricanes in Cuba. And climate change is taking its toll on the area's beaches and coasts – particularly in the form of tropical storms, warming waters, overfishing, and stunted coastal development.

Our CBF grant allows us to take advantage of natural solutions, employed by local community members to restore ecological function. GNP is one of three sites in Cuba identified by this project and the only site to host all three efforts outlined in the CBF grant: mangrove restoration, coral restoration, and carbon insetting.



CORAL RESTORATION

GNP's coral reefs are critical to the local economy, providing coastal protection and marine refuge. Coral restoration work at GNP is based on prior efforts, where 500 fragments of coral have been planted since 2018. GNP is also now a pioneer site for the novel method of larval coral propagation. In February 2022, our team carried out a coral restoration workshop in the D.R. in collaboration with the Dominican Foundation for Marine Studies (**FUNDEMAR**), **SECORE International**, and the **University of Havana's Marine Research Center**. During the workshop, a group of Cuban scientists traveled to Bayahibe to learn about new coral seeding methods through presentations, diving, and snorkeling sessions. These techniques will increase the effectiveness of GNP's coral restoration efforts.

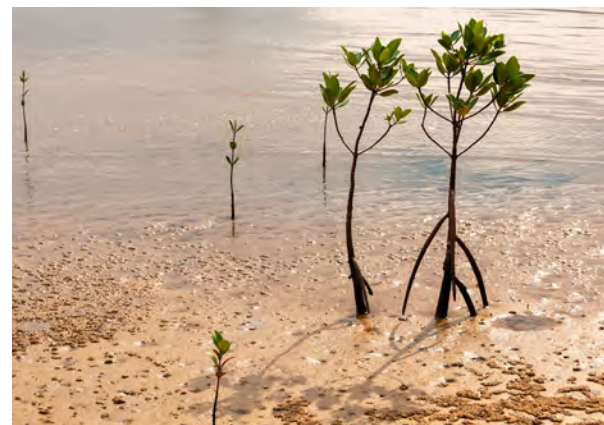


FEATURED PARTNERS



MANGROVE RESTORATION

As part of the CBF project, GNP staff and community members recently completed an assessment of mangrove health in La Fe and identified restoration areas using local fishers' boats. GNP managers are also holding workshops to train La Fe residents in mangrove restoration and directly involving them in monitoring.



CARBON INSETTING

GNP has experienced massive sargassum strandings in recent years, impacting local beaches. As an expansion of our success in the D.R., we will soon initiate a project to transform the nuisance sargassum into compost for use by agricultural communities. GNP staff and communities will learn sargassum collection and compositing techniques from experts in D.R. and eventually set up an experiential organic farm where local farmers can train, gather, and organize sargassum compost for commercialization.



Cuba's **Jardines de la Reina** is an uninhabited archipelago off Cuba's southern coast that includes a variety of coral reefs, seagrasses, and mangroves. In 1996, much of the archipelago was closed to fishing, making it the largest marine protected area in the Caribbean. The remoteness and protection of Jardines spared the devastation experienced by most Caribbean reefs, allowing many rare species to flourish – notably the critically endangered elkhorn coral.

The Ocean Foundation and the University of Havana have been collaborating since 1999. In 2018, we teamed up again to embark on a multi-year effort to document healthy colonies of elkhorn coral in Jardines, create an outreach platform for divers and fishers, and initiate a restoration effort to bring colonies back to areas they once occupied.

In December 2021, a team of marine biologists from the University of Havana's Center for Marine Research and Center for Coastal Ecosystems Research set out on a two-week coral reef research expedition to Jardines de la Reina National Park. Scientists assessed the health status of 29,000 corals to establish a baseline in advance of our major restoration efforts.

From February 19 to March 4, 2022, two dozen Cuban scientists also embarked on a two-week coral reef monitoring expedition to Jardines de la Reina. There, they sampled coral health at 24 sites – and surveyed a total of 17,325 coral colonies – to study coral and seagrass health, the impact of wave energy on reef-building corals, and feeding behaviors of herbivorous fish.



PHOTOS © NOÉL LÓPEZ FERNÁNDEZ AND MAYDEL PEREZ

Blue Carbon in Puerto Rico

Vieques, PR: Completing Our Pilot Project

Viequenses are survivors. Military testing, hurricanes, droughts, and deficient transportation and health facilities have been the norm for over 60 years. But, while Vieques is one of the least-invested areas in Puerto Rico, it has some of the most beautiful beaches, extensive ecosystems, unique flora and fauna, and resilient people in the world. And, it is home to the brightest Bioluminescent Bay – a key environmental, economic, and cultural resource.

The Vieques Bioluminescent Bay Natural Reserve is a protected area co-managed by our partner, the **Vieques Conservation and Historical Trust** (VCHT), and the Department of Natural and Environmental Resources (DNER). The reserve contains mangrove forests, seagrass meadows, salt flats, and a variety of fauna. After Hurricane Maria, many mangroves and seagrasses were destroyed. This could quickly lead to erosion, the loss of the Bay's bioluminescence, and the devastation of Vieques' tourism-based economy.

Our restoration project seeks to restore mangrove and seagrass ecosystems around the reserve; enhance the resilience of the dinoflagellate responsible for the Bay's bioluminescence; prevent further erosion; and act quickly enough to achieve sufficient area maturity and coverage before the next major hurricane. We're working closely with VCHT to provide the people of Vieques with the skills and training to sustain and expand habitat restoration projects throughout Puerto Rico.

FEATURED PARTNER





PHOTOS © ALEX FORESTIER, HAROLD CAMILO



This year, we focused on a feasibility assessment and restoration plan for the Bay. We visited Vieques in November 2021 for a results dissemination workshop, which involved representatives from the DNER, the Mayor of Esperanza's office, VCHT, and local nonprofits. VCHT and our lead technical expert Manuel Merello presented on the work performed to date in Vieques, including constructing a mangrove nursery, a pilot restoration project, a Bay bathymetric survey, seagrass mapping,

and a feasibility assessment. Later, we met with VCHT's board of scientific advisors to discuss assessment findings and our draft large-scale restoration plan. Permitting for a larger mangrove restoration project is on hold until further negotiations on the degree and scale of efforts needed have taken place. However, we are moving forward with VCHT on permitting a new seagrass restoration and living shoreline project at the critically important mouth of the Bioluminescent Bay.

Jobos Bay, PR: Mangrove and Seagrass Restoration

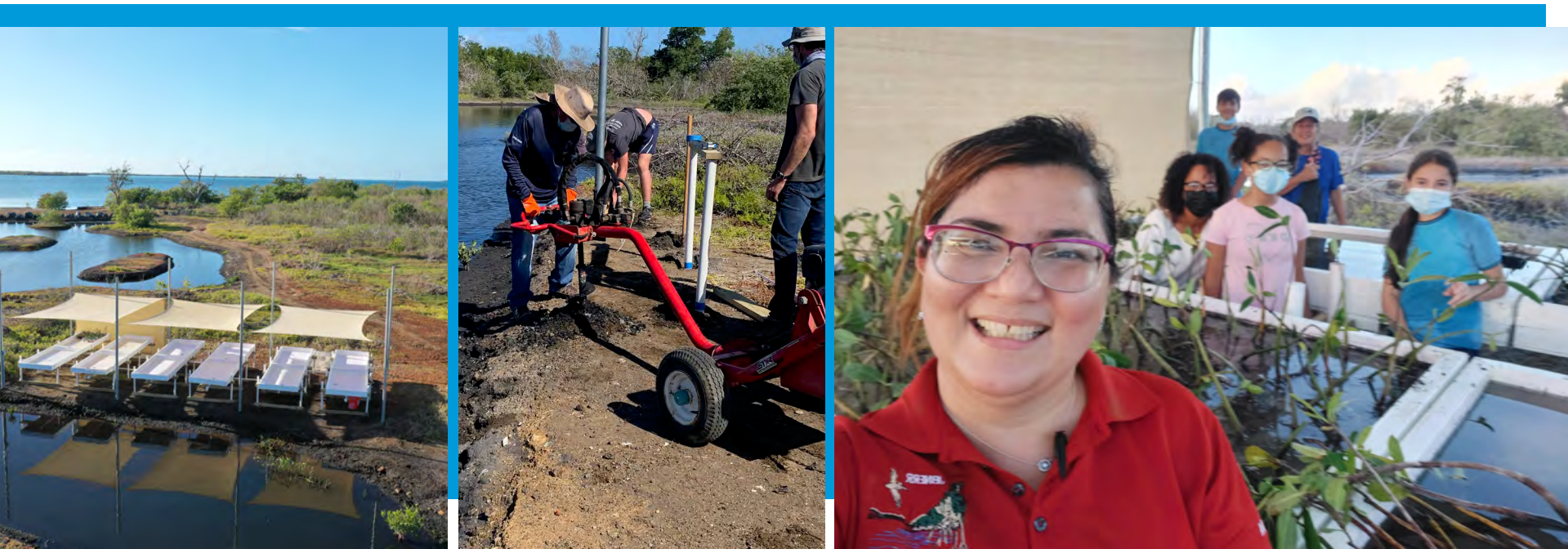
The **Jobos Bay National Estuarine Research Reserve** (JBNERR) is a U.S. federally protected estuary in Puerto Rico, dominated by tropical ecosystems including mangroves and seagrasses that provide sanctuary to endangered species – including the brown pelican, peregrine falcon, several species of sea turtle and shark, and the West Indian manatee.

MANGROVE RESTORATION

In 2017, JBNERR's mangrove forests were heavily disturbed by Hurricane Maria. Despite being part of the United States, Puerto Rico is often under-prioritized by both the U.S. Federal government and private funders. This represents a major climate justice challenge for island and coastal communities worldwide. As Jobos Bay is one of the poorest regions in

Puerto Rico, conducting large-scale restoration work in JBNERR provides new job opportunities and protects and enhances the abundance of natural resources for commercial fisheries and ecotourism.

Following our mangrove restoration pilot project from 2019 to 2020, we completed construction of a red mangrove nursery at JBNERR, which has the capacity to raise over 3,000 small mangrove saplings per year using a solar-powered multi-tank/pump system. We hope to expand the site to create a flooded mangrove nursery, which requires less effort in terms of setup and maintenance and allows us to increase the number of well-developed mangroves we can raise. We also intend to include growing areas for both white and black mangroves. During the first few years of the



PHOTOS © BEN SCHEELK, MANUEL MERELLO



Jobos Bay large-scale mangrove restoration project, we aim to plant over 15,000 mangrove trees in addition to hydrological restoration.

We also commenced a comprehensive blue carbon baseline assessment for the large-scale mangrove restoration project in preparation for certification under the Verified Carbon Standard (VCS). Having a baseline assessment will enable us to determine carbon sequestration and storage over time in the restored areas.

In addition to the many benefits for wildlife, the project will provide additional coastal protection through natural infrastructure, helping to prevent or mitigate flooding in local communities. Finally, this mangrove reforestation effort, one of the largest of its kind ever attempted in Puerto Rico, will contribute to building a “community of practice” that will catalyze additional large-scale coastal resilience projects via knowledge sharing, on-the-ground training, and expanded research opportunities for local people.

SEAGRASS RESTORATION

This past year, The Philadelphia Eagles offset their team’s emissions from their 2021 season’s travel through our SeaGrass Grow program. The Eagles were the first U.S. professional sports team to offset its carbon footprint, paving the way for other organizations and corporations to effect change for our planet.

Our newest seagrass restoration efforts involved installing signs for boaters and documenting our new ongoing 6.5-acre seagrass restoration efforts at Mata Redonda in Jobos Bay. This project is part of a larger effort made possible by our recently secured set of Army Corps of Engineers permits. We now have the ability to restore upwards of 100 acres over the next few years in Jobos Bay.

FEATURED PARTNER



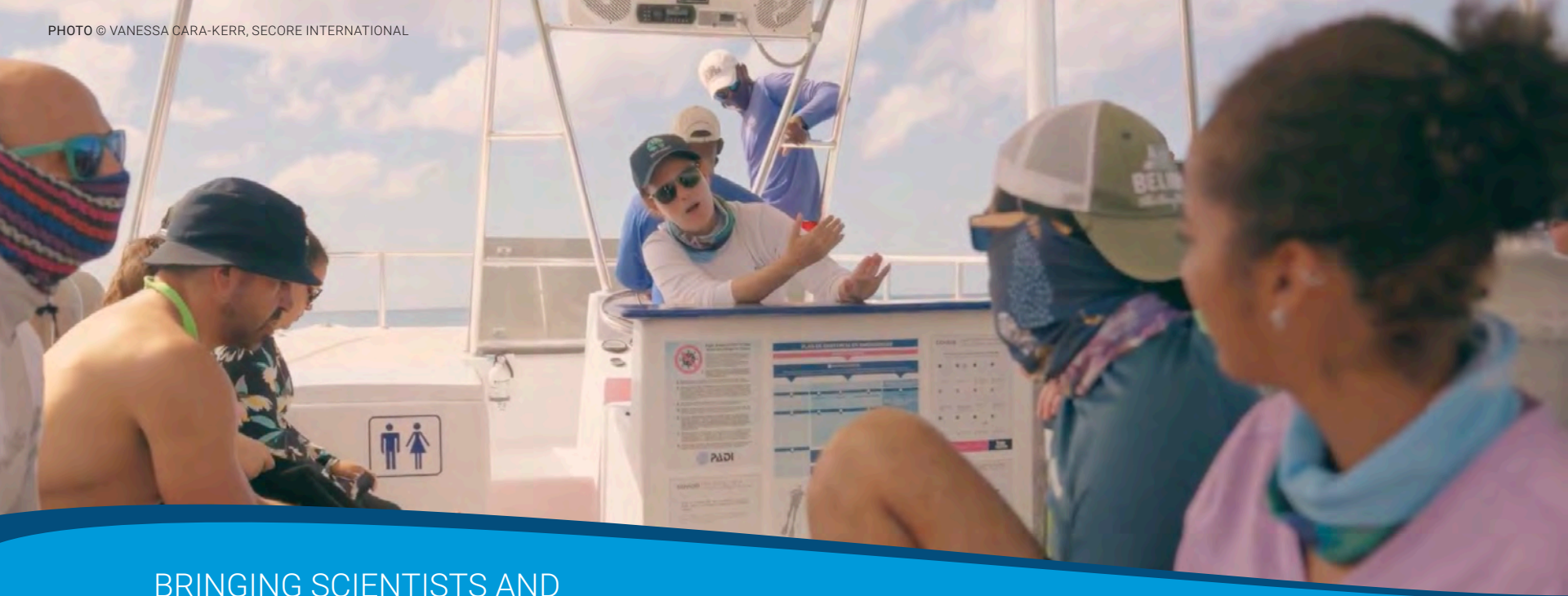
OCEAN SCIENCE DIPLOMACY

As a society, we tend to organize things. We draw state lines, create districts, and maintain political boundaries. But, the ocean disregards any lines we draw on a map. Across the 71% of the earth's surface that is our ocean, animals cross jurisdictional lines and our oceanic systems are transboundary in nature.

We can establish trust and maintain relationships when we share ideas and resources around the ocean. "Ocean science diplomacy" is a multi-faceted practice that can occur on two parallel tracks. Scientists can come together through joint research projects to find solutions to the ocean's biggest problems. With the information developed through this collaboration, scientists can also educate decision makers about the state of changing coasts — and encourage them to ultimately change policies.

Ocean science diplomacy can help build long-lasting relationships and increase global awareness around the ocean issues that affect us all.





BRINGING SCIENTISTS AND
POLICYMAKERS TOGETHER FOR CHANGE

CARIBBEAN MARINE RESEARCH AND CONSERVATION

The Caribbean is a densely populated, highly diverse region – dependent on healthy coastal habitats to maintain its income from local fisheries and preserve its most important industry: tourism.

The Caribbean's 26 countries are uniquely susceptible to climate change. Sea level rise and tropical storms contribute to coastal erosion, harmful algal blooms, ocean acidification, and fragmentation of critical habitats such as coral reefs, seagrasses, beaches, and mangroves. Corals, in particular, have suffered massive decline due to bleaching and mortality, diseases, and hurricane damage. Mangroves are being displaced by urban development and changes in hydrology. And beaches are being suffocated by sargassum bloom strandings, so much so that Caribbean countries have experienced a 30-35% reduction in tourism bookings.

We know that nations that share waters – and many of the same coastal species and habitats – are also affected by a shared set of issues and environmental factors. It only makes sense for neighboring countries and governments to work together to achieve common goals.

Our Caribbean work has strived for over two decades to strengthen regional cooperation and technical and financial capacity in all aspects of marine and coastal sciences, while supporting sustainable policy and management of the unique cultural and ecological resources of the Caribbean region. We focus on multinational coordination to sustain rich biodiversity and coastal communities and ensure the Caribbean is healthy, productive, and climate-resilient.



“ It’s a big Caribbean. And it’s a very linked Caribbean...Climate change, sea level rise, mass tourism, overfishing, water quality. It’s the same problems that all countries are facing together. And all of those countries don’t have all of the solutions. So by working together, we share resources. We share experiences.

Fernando Bretos

Program Officer, The Ocean Foundation

A New Generation of Coral Restoration

Our Coastal Resilience Workshop in the Dominican Republic

From February 7-11, 2022, we officially launched our three-year project to build coastal resilience in the two largest island nations of the Caribbean: Cuba and the Dominican Republic. The Ocean Foundation's own Katie Thompson, Fernando Bretos, and Ben Scheelk represented us at a coral restoration workshop in Bayahibe, Dominican Republic – just outside of the Parque Nacional del Este (East National Park).

The workshop, *Community-based Coastal Remediation in the Insular Caribbean's Two Largest Nations: Cuba and the Dominican Republic*, was funded by a \$1.9M grant from the Caribbean Biodiversity Fund (CBF). Together with the Dominican Foundation for Marine Studies (FUNDEMAR), SECORE International, and the University of Havana's Marine Research Center, we focused on novel coral seeding (larval propagation) methods and their expansion to new sites. More specifically, we focused on how scientists from the D.R. and

Cuba could collaborate on these techniques and ultimately incorporate them into their own sites. This exchange is intended as a south-south collaboration, where two developing countries are sharing and growing together to find innovative nature-based solutions for coastal resilience.

Coral seeding, or larval propagation, is the collection of coral spawn (coral eggs and sperm, or gametes) that are able to fertilize in a laboratory. These larvae are settled on special substrates that are later dispersed on the reef without need for mechanical attachment. In contrast to coral fragmentation methods that work to clone coral fragments, coral seeding provides genetic diversity. This means that propagative seeding supports the corals' adaptation to changing environments caused by climate change, such as coral bleaching and elevated sea water temperatures. This method also garners millions of coral babies out of one coral spawning event.





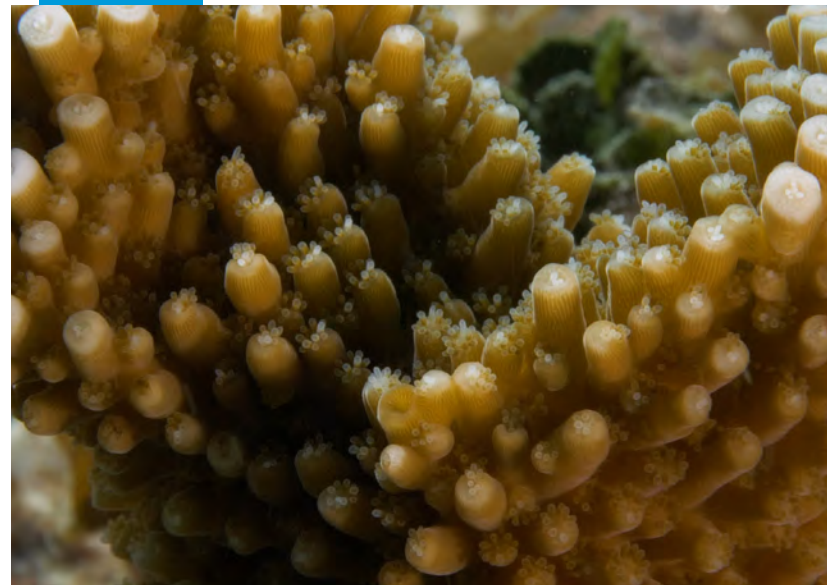
Over the course of four days, those who joined the workshop learned about the novel coral seeding techniques developed by SECORE International and implemented by FUNDEMAR. The workshop served as an important step in a larger plan for upscaling novel methods of coral restoration and enhancing coral reef ecosystems in the D.R.

Seven Cuban scientists, half of them graduate students studying coral reef ecology at the University of Havana, also participated. The scientists hope to replicate seeding techniques at two sites in Cuba: Guanahacabibes National Park (GNP) and Jardines de la Reina National Park (JRNP).

Most importantly, the workshop allowed scientists from multiple countries to share information and knowledge. 24 participants from Cuba, the D.R., U.S., and Mexico attended presentations by SECORE and FUNDEMAR on their lessons learned with larval propagation in the D.R. and across the Caribbean. The Cuban delegation also shared their own experiences and insight.

Workshop participants also received an immersive experience: They went scuba diving and snorkeling to see FUNDEMAR's coral nurseries, coral plantings, and experimental set-ups. The workshop's hands-on and collaborative nature sought to provide the training for a new generation of Cuban coral restoration specialists.

Corals provide refuge for fisheries and enhance livelihoods for coastal communities. By restoring corals along the coastal fringe, coastal communities can be effectively buffered against the rising sea level and tropical storms attributed to climate change. And, by sharing solutions that work, this workshop helped kick off what we hope will be a long and fruitful relationship among participating organizations and countries.



PHOTOS © VANESSA CARA-KERR, SECORE INTERNATIONAL



How Common Threats to Shared Resources Can Overcome Politics

Our Panel for the The American Association for the Advancement of Science (AAAS)

The American Association for the Advancement of Science (AAAS) is a U.S.-based, international nonprofit organization, helping promote cooperation among scientists, defend scientific freedom, and encourage scientific responsibility. With over 120,000 members, AAAS is the largest general scientific society in the country. During their annual conference in February, 2022 in Philadelphia, Pennsylvania, our Blue Resilience Initiative team led a panel called *Ocean Diplomacy: How Common Threats to Shared Resources Can Overcome Politics*.

The four-person panel included our own Fernando Bretos and Katie Thompson, who attended as panelists and moderators. Not only did the panel feature our Ocean Science Diplomacy work in the Gulf of Mexico and Western Caribbean, but it also featured a presentation by David Gordon, director of the TOF-hosted Eurasian Conservation Fund, about U.S. and Russia collaboration on marine mammals in the Bering Sea.

Also presenting was Dr. Abed El Rahman Hassoun, who leads the Ocean Acidification Mediterranean Hub. OA Med Hub, which partners with our International Ocean Acidification Initiative (IOAI), brings together OA scientists from the Mediterranean to organize and prioritize research and data about our changing ocean chemistry.

“ Science knows no boundaries...Science is a property of no nation, but the entire universe.

Dr. Abed El Rahman Hassoun

Ocean Acidification
Mediterranean Hub





BRIDGING GAPS TO STRENGTHEN CLIMATE ACTION

OUR WORK IN MEXICO

In 2007, ocean science diplomacy was quickly becoming a major cross-cutting theme throughout our work at The Ocean Foundation. The Trinational Initiative was formed to help advance neutral collaboration and conservation in the Gulf of Mexico and Western Caribbean, which was initially envisioned as a bilateral platform between Cuba and the United States.

We made the strategic decision to include Mexico in the Initiative in 2008. Not only does Mexico occupy almost half of the Gulf of Mexico coastline, but by bringing in a more neutral party – one not subject to the U.S. embargo against Cuba – we could regionalize the effort and buffer political winds. The decision quickly paid off: The Ocean Foundation and our Cuban and Mexican institutional partners have convened eight Trinational Initiative meetings to date.

And, a 2013 meeting in Texas led to the creation of a sister sanctuary agreement between the U.S. and Cuba. In 2017, we again included Mexico in this agreement – which added seven marine protected areas to the network. Now called the Gulf of Mexico MPA Network, or RedGolfo, this initiative prioritizes equal standing for the three countries in terms of research and management decisions for their MPAs.

Building on our decades-long local partnerships in Mexico, The Ocean Foundation is excited to continue facilitating discussions and joint activities between the United States, Mexico, and Cuba on marine conservation – working to strengthen Mexico's response to our changing ocean at the executive, legislative, and scientific level.

Fighting Climate Change through Ecosystem-based Adaptation

Adaptation Based on Coastal Ecosystems: Our Report with the World Resources Institute

This year, we made great use of our long-standing partnership with the World Resources Institute (WRI) to continue our work together in Mexico. The Ocean Foundation, WRI Mexico, and Fundación Mexicana del Océano issued a report on the prioritization and monitoring strategies for mangroves in the locations of Tuxpan, Veracruz and Celestún, Yucatán, authoring seven distinct chapters that we hope can help accelerate the adaptation of blue carbon into Mexico's Nationally Determined Contribution (NDC) committed in 2020. This initiative was convened and organized with the support of the NDC Partnership, the National Institute of Ecology and Climate Change (INECC), and the Ministry of Environment and Natural Resources (SEMARNAT).

The report highlighted a mapping of successful activities in the country, as well as the development of a methodology to build a blue carbon baseline and a guide

with recommendations to scale and replicate successful restoration initiatives in mangrove ecosystems. This project is now part of the Package for the Strengthening of Climate Action, of the NDC Partnership, to help countries in Latin America with their sustainability goals and action on climate.

A public presentation of results was also culminated in the report, where Adriana Lobo de Almeida, Executive Director of WRI Mexico, highlighted the potential of the study to both protect coastal areas affected by climate change, and to offer practical results that can help maintain their ecology and care for the people who rely on their resources.

This type of Ecosystem-Based Adaptation (EbA) includes benefits such as increased fisheries, tourism activities, recreation, carbon sequestration, and maintenance of local biodiversity, among others.



Mangroves have the capacity to mitigate the effects of climate change through the sequestration and storage of organic carbon, at rates between three and five times higher than those of terrestrial forests. In addition, they protect coastlines and communities from climate impacts.

Adriana Lobo de Almeida | Executive Director, WRI Mexico

Reducing Disruption of the Climate Through Restoration and Nature-based Solutions

Our 2022 UN Ocean Conference Virtual Side Event

During the 2022 United Nations Ocean Conference, we hosted a virtual side event on June 30, 2022 where we presented case studies on reducing disruption of the climate through marine coastal ecosystem restoration.

The Ocean Foundation and our partners discussed how we've implemented nature-based solutions during the event from a regional and national perspective in Mexico – including maintaining and restoring mangrove ecosystems – and how we've been collecting data on its effectiveness. We shared how mangroves, coral reefs, and seagrasses provide important ecosystem services for climate change adaptation and mitigation, and discussed the main challenges to implementing blue carbon ecosystem restoration.

We also reiterated the consensus that mangroves are an important ecosystem to human well-being, because they help stabilize the coastline and provide natural infrastructure and protection to nearby populated areas. Mangroves in Mexico are exposed to economic and socially illogical destruction, so protection and conservation efforts from different sectors are needed now more than ever.

As a regional community, Mexico recognizes the urgency of addressing climate change while promoting sustainable economic development. At The Ocean Foundation, we believe collaborative efforts can help pave the way for strategic action. And, it can help the Wider Caribbean region rally private investors, non-profit organizations, and government actors to restore and protect coastal ecosystems and increase climate resilience.

KEY EVENT TOPICS

Government Actions: We gave an overview of the Mexican government's tools to monitor Ecosystem-based Adaptation and climate change vulnerability reduction, with a focus on the Gulf of Mexico, Tuxpan, and Celestún. We also presented our report findings with WRI Mexico.

Regional Planning: We summarized highlights from the report, "Regional Strategy and Action Plan for the Valuation, Protection and/or Restoration of Key Marine Habitats in the Wider Caribbean".

Site Prioritization: We explained the utilization of a four-part scorecard that starts at the country level and narrows to specific large-scale habitat restoration sites. Through this process, 19 scorecards were produced for 16 countries in the Wider Caribbean region, and 48 unique large-scale habitat restoration sites were identified.

Technical Capacity Building: We presented a manual for use by government entities, civil organizations, the academic community, the business sector, members of civil society, indigenous peoples, and local communities. The manual focuses on capacity building and restoring mangroves in the Mesoamerican Reef System (MAR) and the Wider Caribbean.

Data Availability: We recognized that the lack of consistent data on the effectiveness of NbS could be barriers to its implementation. We shared critical and recent perspectives about the potential for socio-ecological restoration to be implemented in Mexico.

EVENT PARTNERS



SEMARNAT
SECRETARÍA DEL MEDIO AMBIENTE Y
RECURSOS NATURALES



INECC
INSTITUTO NACIONAL
DE ECOLOGÍA Y
CAMBIO CLIMÁTICO



**Fundación Mexicana
para el Océano A.C.**



WRI MEXICO



Celebrating 50 years of the Coastal Zone Management Act

The III International Forum on the Coastal Zone Management Act's 50th Birthday

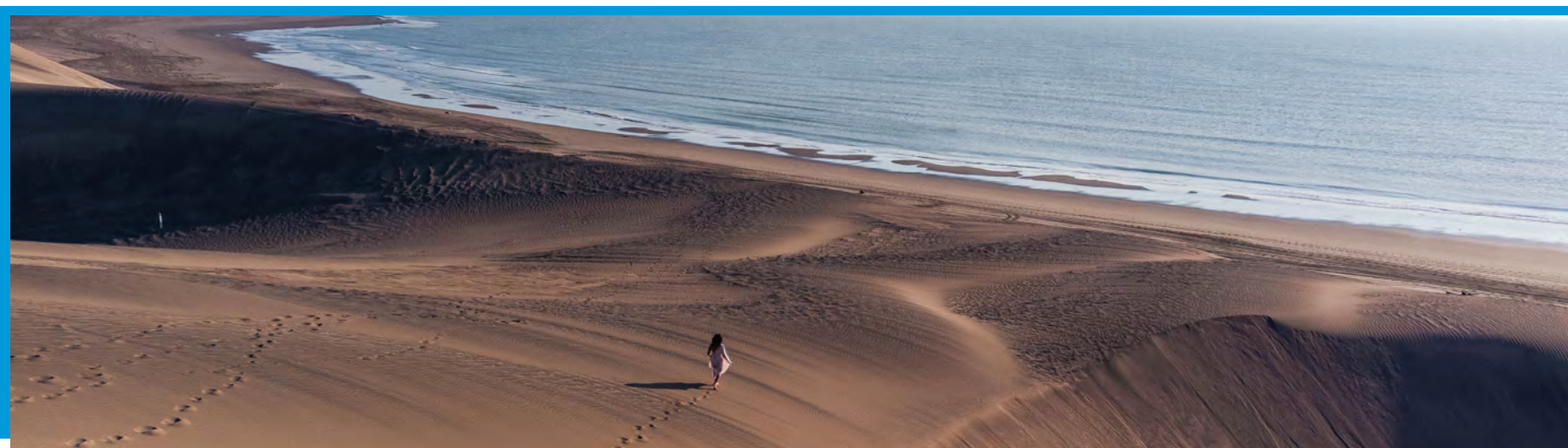
In 1972, the United States enacted a series of laws – the Marine Protection, Research, and Sanctuaries Act; the Marine Mammal Protection Act; the Coastal Zone Management Act; and Clean Water Act amendments – to protect our ocean, coasts and Great Lakes. 50 years later, we assisted in both gathering the legislative history of the Coastal Zone Management Act (CZMA) and celebrating its groundbreaking conception.

On June 9, 2022, a hybrid event was held by Colombia's Congress to commemorate CZMA's 50th anniversary and discuss the importance of advancing coastal legislation in Colombia. The event, "III International Forum on the Coastal Zone Management Act's 50th Birthday", was supported by The Ocean Foundation as well as the Sergio Arboleda University and Santa Marta Headquarters, and featured speakers from the

United States, Spain, Cuba, and Mexico.

Alejandra Navarrete, on behalf of The Ocean Foundation, gave an initial address to the Colombian Congress about the 50 years of progress made and the need to set a course for new policies and actions that can transform our future.

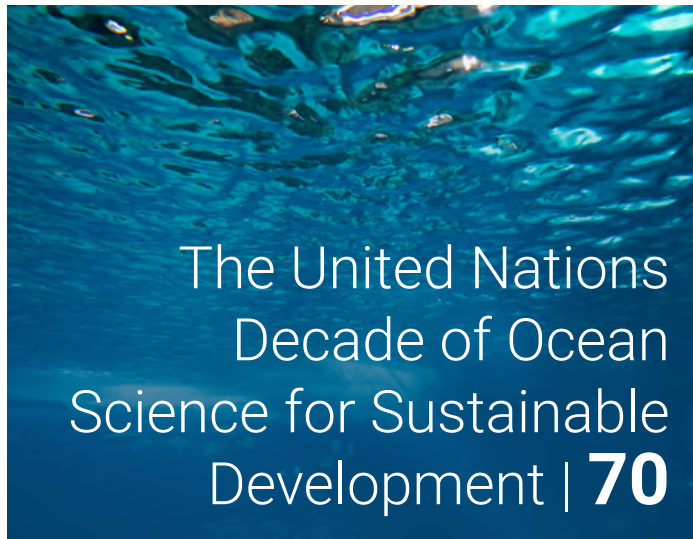
50 years after CMZA, we face a new magnitude of climate change and biodiversity loss. At the same time, coastal communities face a host of issues including construction and development, migration and displacement, loss of culture, and the fight to ensure equitable access to nature and resources. During the CMZA Forum, we emphasized that the decisions we make today will have long-term consequences for the health of our blue planet.



**NETWORKS,
COALITIONS AND
COLLABORATIVES**

No one alone can do what the ocean needs. That's why, at The Ocean Foundation, we help launch and facilitate **networks, coalitions, and collaboratives** – bringing individuals and organizations together with the same interest in pushing the envelope for ocean conservation.

Together, we facilitate international dialogues and workshops, maintain a diverse network of implementers, and increase the number of funder collaboratives to support organizations globally. We are proud to be a part of the following networks, to advance our collective goal of ocean restoration.



THE OCEAN DECADE

The United Nations Decade of Ocean Science for Sustainable Development



The Ocean Foundation has remained a dedicated contributor to the **United Nations Decade of Ocean Science for Sustainable Development** since its launch in June 2021. We have been engaging civil society, and stakeholders that are not well-represented by other Decade actors, to help ensure the UN Decade's success. After the first working meeting of U.S. NGOs, we compiled a synthesis report to determine initial steps in the creation of new subcommittees focused on governance, outreach and communications, and fundraising.

We have also been leading communications and the distribution of resources between the group of U.S. NGOs involved, currently encompassing roughly 80 points of interest. This database will help us work towards a space for two-way dialogues to guide the planning of future steps. We attended the second Informal Foundations Dialogue meeting, organized by the UNESCO Intergovernmental Oceanographic Commission, where we received new information to share with the NGOs group. Included in this was the early announcement of newly-endorsed Decade Actions, the second Call for Decade Actions, and a preliminary needs assessment.

This year, the 2022 Ocean Sciences Meeting from February 24 to March 4 was focused around coming together over common goals despite the unsettling times of the COVID-19 pandemic. We participated in a panel at this event, representing on behalf of NGOs and what we are doing for the Ocean Decade.



EQUISEA

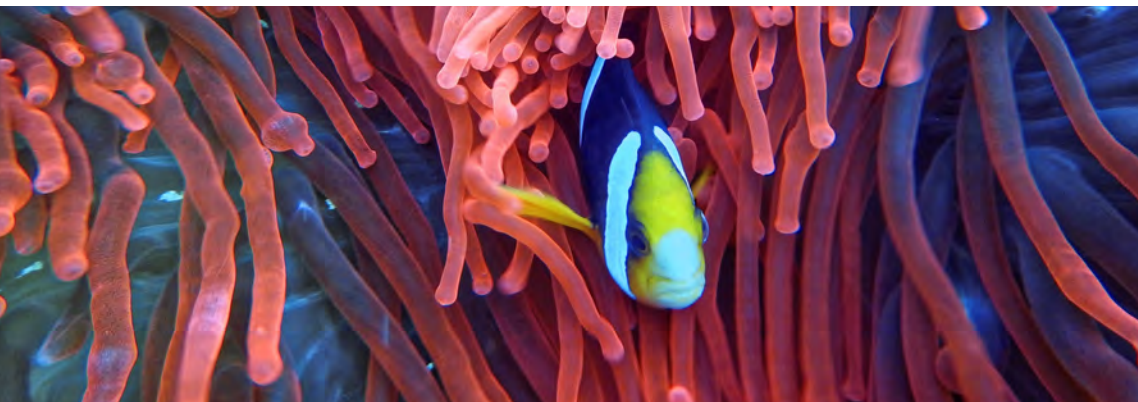
The Ocean Science Fund for All

The Ocean Foundation is a co-leader of **EquiSea** – a funder collaborative effort working to ensure equity in ocean science capacity. We have worked with other co-leaders to create a regional approach to allocate the investments from public and private sectors into a diverse mix of human, financial, and physical infrastructure for ocean science. We are starting with regional needs assessments so that we can better understand the existing ocean science capacity and its lacking areas.

This year, we created a **concept note** for EquiSea based on input from hundreds of stakeholders. The note addresses the challenges and needs for ocean science equity as well as our objectives and proposed

solutions. This document will act as a guide for building capacity in the ocean sciences. We also participated in several conference panels and presentations with the goal of advancing conversations around ocean science equity and the best practices to achieve this.

We hope to work with government agencies, academic institutions, private sector groups, and other stakeholders in key regions to educate and collaborate on blue economic opportunities. Ultimately, our goal is to create opportunities for countries to share their approach to ocean conservation, its resources, and its human-caused effects on their communities – resulting in a stronger connection to the global economy.



EQUISEA
The Ocean Science Fund for All

THE CLIMATE STRONG ISLANDS NETWORK

Building a Coalition of United States Islands

The **Climate Strong Islands Network** (CSIN) focuses on building a coalition of U.S. islands – working together to drive more resources locally, accelerate the pace of information exchange, and help amplify local island policy needs. CSIN is an official chapter of the **Global Island Partnership** (GLISPA) and is co-hosted and fiscally sponsored by The Ocean Foundation. To support the broader international island community, CSIN has also become a member of the **Local2030 Islands Network**, the world's first global, island-led peer-to-peer network devoted to advancing Sustainable Development Goals through locally driven solutions.

This year, CSIN created and launched the first-ever **National Policy Framework** for U.S. island communities, highlighting seven key issues that island communities face and providing

policy recommendations to help lawmakers and federal officials better support climate resiliency work. The key issues include clean energy, watershed planning, food security, disaster preparedness, marine economy, waste management, and transportation. CSIN would like to thank **High Street Strategies** for their work and dedication to the development of the Framework, and Miya Rowe of **Rowe House Design** for design and production.

During the 2022 Our Ocean Conference, CSIN committed to **investing \$3 million** to U.S. island communities over the next 5 years (2022-2027) – alongside the Local2030 Islands Network to advance joint goals. This includes establishing a National Island Policy Audit, and advocating for increased federal resources and attention to island issues in the areas outlined in CSIN's National Policy Framework.

STEERING COMMITTEE

CSIN is governed by an independent Steering Committee from diverse representations across U.S. island communities who work to drive the Network's priorities forward.

LEARN MORE



GET INVOLVED

The Steering Committee hosts working subcommittees that focus on critical areas of CSIN's mission: Community Outreach, Development, and Policy. If you want to learn more, join a subcommittee, or sign onto the Declaration, please contact Network Facilitator Elizabeth Okeke-Von Batten at elizabeth@climatestrongislands.org or visit climatestrongislands.org.



THE OCEAN PANEL

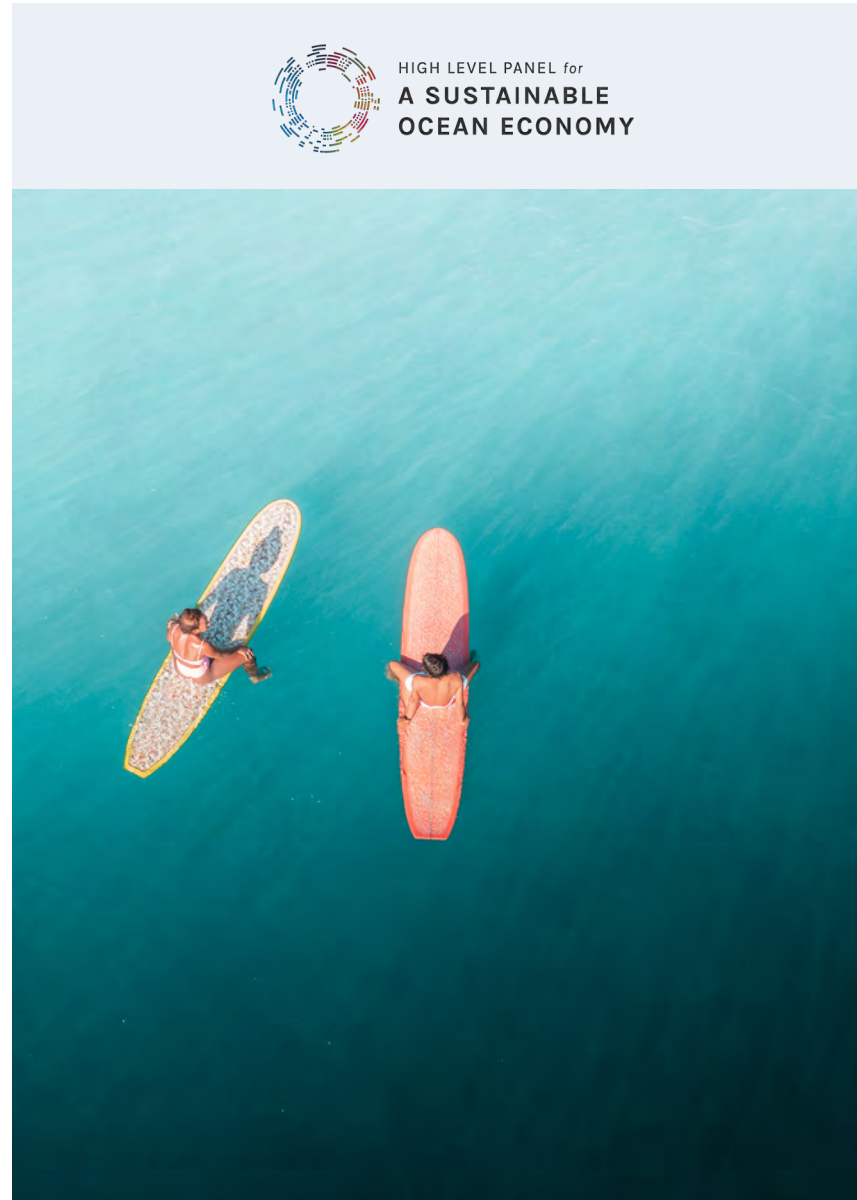
High-Level Panel for a Sustainable Ocean Economy

The Ocean Foundation is one of the co-chairs of the Tourism Action Coalition for a Sustainable Ocean (TACSO) – a coalition aiming to shift the ocean tourism economy to a more sustainable approach through a balance of education and action-building coastal resiliency. The goals established by TACSO are to drive collective action through nature-based solutions in building coastal restoration, enhance stakeholder engagement to increase socio-economic benefits in tourism-heavy countries, create government engagement, shift traveler behavior, increase sharing of knowledge about the ocean and coastal threats, and change policy through their High Level Panel.

Through the High Level Panel for Sustainable Ocean Economy, we have been working with the Mexican government in their sustainable tourism efforts. As a co-sponsor of the High Level Panel, we have been strong supporters of their call to action. This year, we officially adopted TACSO as a fiscally sponsored project at The Ocean Foundation and have several new grant opportunities underway. We are extremely excited to see what this project will become down the road.



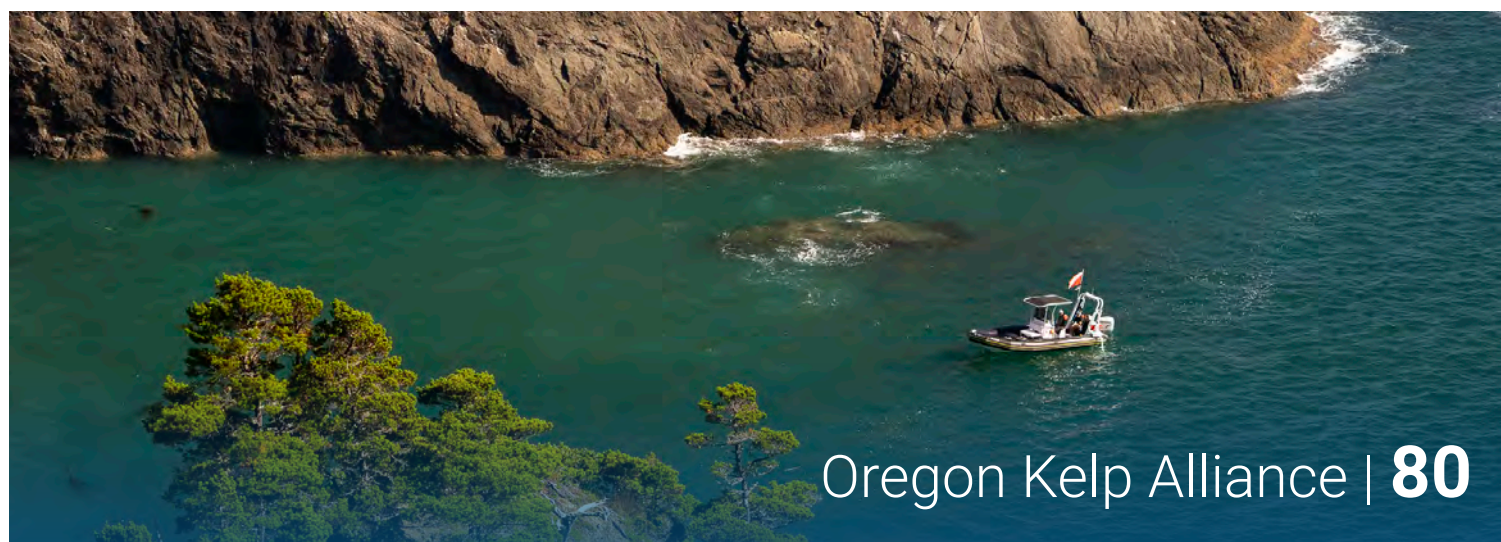
HIGH LEVEL PANEL for
**A SUSTAINABLE
OCEAN ECONOMY**



FISCAL SPONSORSHIP

As a fiscal sponsor, The Ocean Foundation helps reduce the complexity of operating a successful project or organization by providing the critical infrastructure, proficiency, and expertise of an NGO – so projects can focus on program development, fundraising, implementation, and outreach.

We create a space for innovation and unique approaches to marine conservation where people with big ideas – social entrepreneurs, grassroots advocates, and cutting-edge researchers – can take risks, experiment with new methods, and think outside the box. We're spotlighting two of our hosted projects: Big Ocean and Oregon Kelp Alliance.



BIG OCEAN

The Peer-Learning Network of Large-Scale Marine Areas



BIG OCEAN

In 1975, the Great Barrier Reef Marine Park was established. For 25 years, it served as the world's single truly large-scale marine conservation site, dwarfing the subsequent largest sites in magnitudes that made comparisons difficult at best. Finally, in 2000, the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve (known today as the Papahānaumokuākea Marine National Monument) was established. This milestone marked a sea-change in ocean conservation and governance. Two Large-Scale Marine Protected Areas (LSMPAs) set the stage for ocean conservation and management at scale to become an official genre of marine conservation.

Over the next 14 years, eight more vast MPAs came online, with the scope and scale of LSMPAs increasing significantly. This high-paced growth also meant that the needs of managers and national governing agencies needed to increase, setting the stage for Big

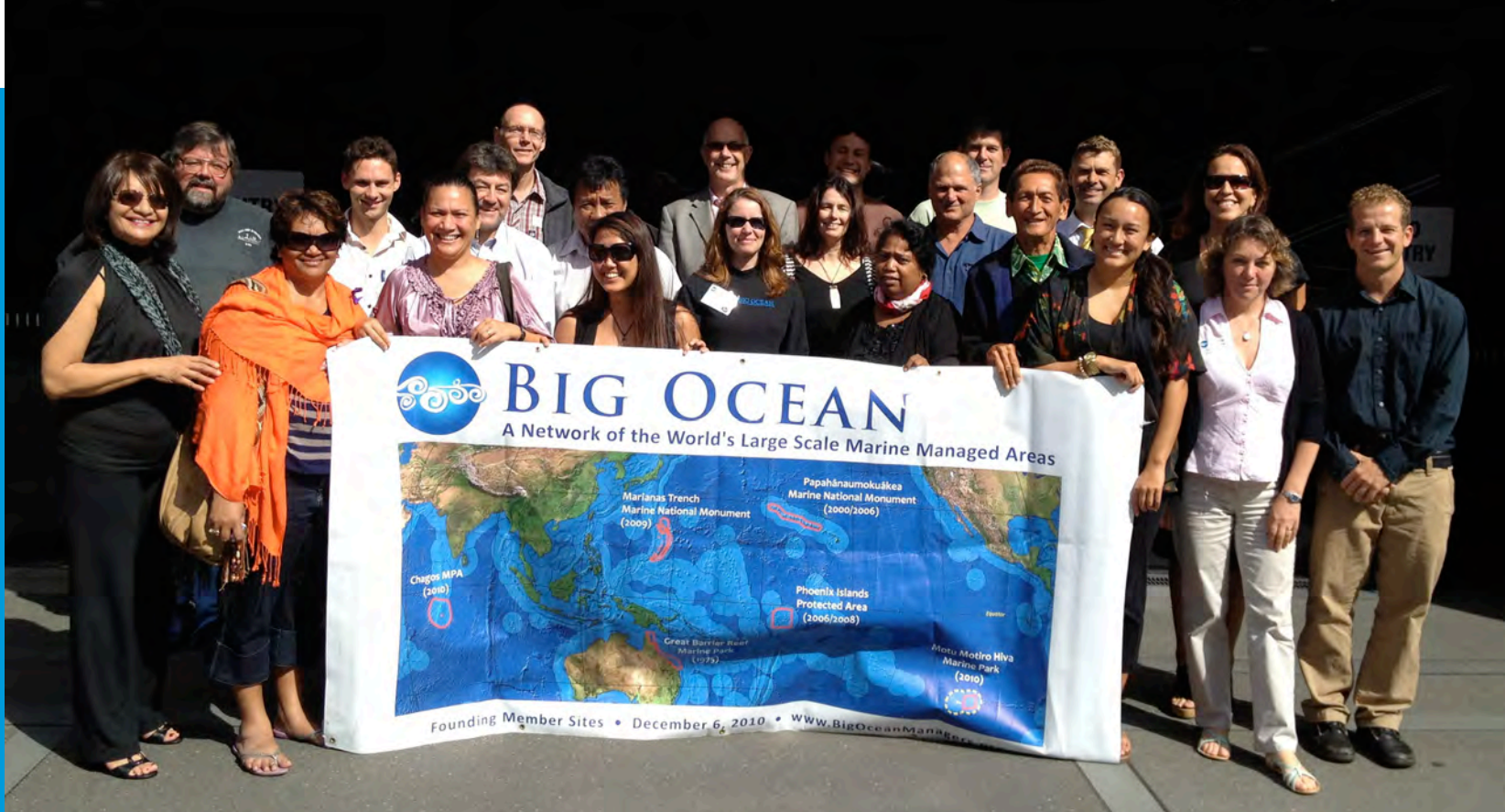
Ocean to emerge. Launched in 2010 by the only established LSMPAs at the time, Big Ocean's membership has expanded from six to 18 sites, representing ten countries and protecting more than 11 million square kilometers of ocean. Globally, there are approximately 41 vast marine sites. But based on Big Ocean's criteria, which are sites larger than 150,000 km² (not including the High Seas) "actively managed for protection across the entire geographic extent of the area," the total number is closer to 33.

Membership in the network is but a means to more effectively convene and communicate with managers and the broader community. Big Ocean aims to grow the field through best practice – to improve the design and on-the-ground management of LSMPAs, through peer learning and partnerships that support developing tools and approaches tailored to the unique needs and challenges of ocean conservation and governance at scale.



PHOTOS © KYDD POLLOCK





An Informal Network

Big Ocean members and partners participate voluntarily. As a non-binding entity, the activities and commitments made by the network are carried forward by members and partners who find value in their efforts. Big Ocean is administered through its Planning Team and Coordinator. Established at the inaugural meeting, the Planning Team carries the largest share of the workload, managing operations and fundraising costs.

The decision to forgo a formal charter or operating agreement has remained, but member sites hold the understanding that this could change over time as the network grows.

Big Ocean utilizes its partnership with The Ocean Foundation to stay agile and innovative while implementing its purpose and achieving its objectives.

The power of Big Ocean is to convene diverse audiences and to create “safe spaces” (virtual and real) where practitioners, managers, scientists, and cross-sector partners can share lessons learned and build both capacity and personal relationships in real-time. As the needs of individual sites can vary widely, the network has developed a variety of activities, processes, and products to produce tangible, practical, and actionable outcomes.



Although there is usually overlap between the purpose and benefits of any engagement, Big Ocean has created three general approaches to accomplish its mission and help other organizations in the field of LSMPAs achieve their goals:

CAPACITY

Expand the skills and professional experience of LSMPA management staff to improve operations on the ground and enhance the network's functioning.

Examples include:

hosting network meetings, presentations, and workshops, peer-learning, and site-to-site exchanges, and pairing LSMPA management teams with related or complementary needs and challenges.

COMMUNICATION

Enhancing the development, collection, analysis, and sharing of information and knowledge, internally and externally.

Examples include:

membership surveys, digital newsletters, outreach materials, press releases, coordinating research publications, maintaining a web presence and social media presence, and presenting at international conferences.

DESIGN

Develop products, tools, services, and approaches that increase the effectiveness of management actions and further professionalize the field of marine management at scale.

Examples include:

designing frameworks and strategies for site diagnostics, workshops, and peer exchanges, producing high-impact research teams, agendas, guidelines, and capacity-building worksheets.

Why Big? Why Now?

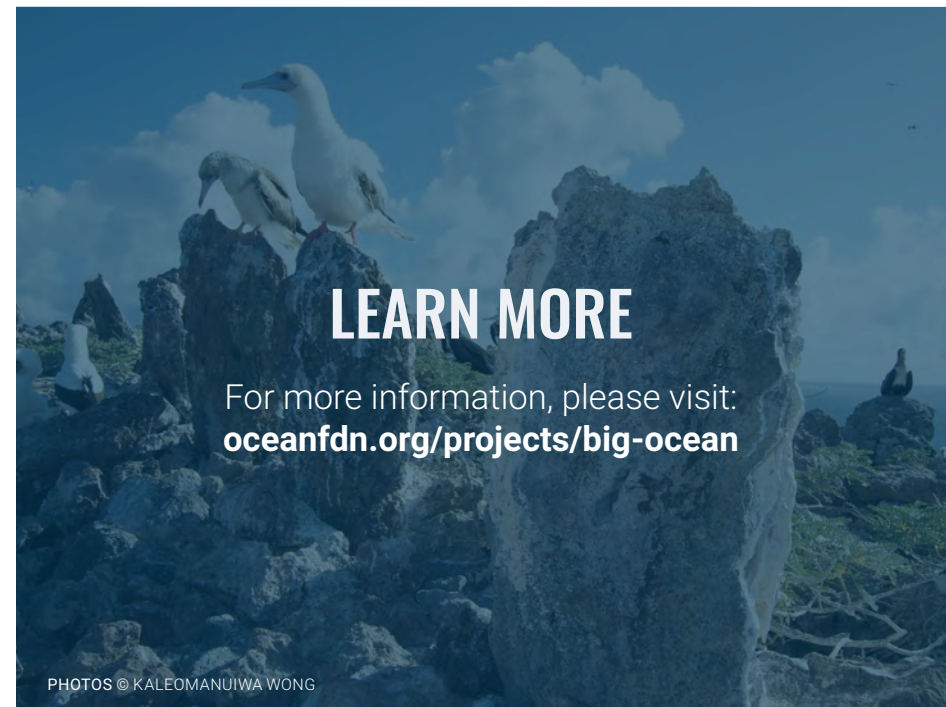
Large-scale marine areas are not more important than smaller-scale sites, but they serve a different and vital function. Beyond the numerous ecological, economic, and cultural benefits that LSMPAs provide, they are our greatest hope for achieving marine conservation goals.

Of the world's current 17,000+ MPAs, the 41 LSMPAs and high seas areas account for 70% of the current protection. The size of LSMPAs accentuates their inter-governmental and global significance: they can often affect international marine policies in ways that smaller-scale MPAs cannot. The UN and other international groups are also exploring establishing more MPAs on the high seas in areas beyond national jurisdiction, clearly signaling that large-scale marine conservation is globally significant.

However, because the field of ocean management at scale is only 20 years old, there are limited examples of effective long-term models to reference. By combining and sharing lessons from mature and recently established large-scale MPAs, Big Ocean seeks to support managers and build on current resources so that best practices of equitable and effective governance become the foundation of LSMPA durability. Big Ocean's advice is constantly evolving. The network strives to keep learning, improving, and supporting members, partners, communities, and the next generation of managers and ocean champions.

Catalytic Partnerships

Currently, the majority of Big Ocean's efforts are being invested in helping achieve the aims of the Blue Nature Alliance, which is an ambitious global partnership that collaborates with governments, NGOs, Indigenous peoples, and scientists to advance effective large-scale ocean conservation. The network seeks to support capacity building and extend its work's impact. Because the Alliance aims to catalyze 18 million square kilometers of the ocean over five years (2020 – 2025), entities like Big Ocean can further support initiatives and relationships at Alliance partner sites. Ultimately, this partnership is helping provide Big Ocean with the same durability critical to individual LSMPAs globally.



OREGON KELP ALLIANCE



Saving the Ocean's Forests

On Oregon's coast, kelp forests provide critical habitat for marine life, sequester carbon, and are deeply connected to Oregon's coastal communities – where local job markets rely on commercial fishing. But portions of bull kelp forests in California, Oregon, Washington, and British Columbia are declining at alarming rates. And, the effects can be felt within the ocean's vast interconnected ecosystems.

Bull kelps thrive in cold, nutrient rich waters. They have suffered recent declines due to a series of marine heat waves. And, sea star wasting disease has led to the loss of the predatory sunflower sea star, which controls sea urchin populations. Now, skyrocketing populations of purple sea urchins, which feed on kelp, are consuming kelp at an alarming rate – leaving behind barrens where only urchins remain. Once they've consumed the kelp, urchins can reduce their metabolism rather than starving, entering a state of torpor – a kind of hibernation – persisting for months without food. Even if young kelps begin to return, they are quickly eaten by urchins that revive in the presence of food. Under these conditions, it is nearly impossible for the kelp forest to recover.

This is where the Oregon Kelp Alliance (ORKA) comes in. ORKA is a diverse group of scientists, natural resource managers, tribal members, tour guides, and chefs, all working to support healthy and abundant kelp forests. ORKA works to solve this local environmental problem that has implications up and down the west coast and across the planet. With support from partners and sponsors, ORKA has developed collaborative projects to enhance our understanding of kelp forest changes and regeneration.

ORKA sets up camp in Port Orford, Oregon, nestled between Bandon and the mouth of the Rogue River. This unassuming fishing community of roughly 1,200 full-time residents is a destination for adventure seekers on both land and sea. It's a place where commercial fishermen, recreation, tourism, and local citizens work together to support science. And, it's where ORKA began to explore various approaches to promote kelp forest health along the west coast and around the world.

A Network of Partners and Sponsors

ORKA is able to accomplish its goals with the help of a wide range of groups and members.

- ***Oregon Sea Grant*** supports ORKA with a grant to promote coordination and development of pilot kelp restoration projects. Once such a project collects starved sea urchins from urchin barrens and feeds them a cultivated edible red seaweed called dulse to enhance their commercial value.
- ***Oregon Coast Visitors Association*** helps develop outreach and educational materials to promote healthy kelp forests in Oregon.
- ***Oregon Sea Farms***, Oregon's only commercial urchin diving company, is helping launch urchin ranch operations in collaboration with ORKA.
- ***The Nature Conservancy*** conducts kelp survey work and identifies candidate areas for restoration through a Pacific Marine and Estuarine Fish Habitat Partnership funded project.
- ***South Coast Tours***, a local ecotour business, provides charter vessel support for survey and kelp forest restoration efforts.
- ***The Ports of Port Orford and Bandon*** support urchin/dulse co-culture operations.
- ***Wild Human*** works with ORKA to tell their story about how they promote healthy kelp forests in Oregon.



- **Oregon State University - Port Orford Field Station's** Marine Studies, Food from the Sea, Aquaculture, and Blue Economy Initiatives all intersect with ORKA's project. Geospatial Ecology of Marine Megafauna (GEMM) Lab analyzes bull kelp and sea urchin populations in potential restoration areas.
- **University of Oregon - Oregon Institute of Marine Biology** conducts kelp forest ecology research, with a focus on food webs and algae/invertebrate interactions.
- **Elakha Alliance** is exploring the potential reintroduction of sea otters in Oregon, with interest in kelp forest health and implications regarding sea urchin populations.
- **Oregon Department of Fish and Wildlife, Shellfish Program** conducts natural resource management and permitting, and monitoring and surveys, of urchin and abalone populations.
- **Oregon Department of Land, Conservation, and Development** manages revisions to the Territorial Sea Plan section on Rocky Habitat, including submerged aquatic vegetation (kelp) policy, with restoration and mariculture opportunities.
- **The Ocean Acidification and Hypoxia Coordinating Council** monitors aspects of ocean chemistry such as pH and dissolved oxygen, which are integral aspects of kelp forest restoration projects.
- **The Spout** is a technology and media partner focusing on sustainable eco-tourism and whale advocacy.

PHOTOS © BRANDON COLE



Kelp Restoration and Surveying

An innovative plan to protect, restore, and promote kelp forest health in Oregon is long underway. Members and partners of ORKA are working on a coast-wide kelp forest survey and restoration plan, under a scientific permit from the Oregon Department of Fish and Wildlife.

This experimental project aims to reduce sea urchin densities in kelp restoration areas identified by local divers. The project includes baseline surveys to determine sea urchin and kelp abundance and densities. It also involves the monitoring and researching of kelp ecosystems, ocean chemistry, and other environmental variables; removal and culturing of purple urchins; and community science, tribal engagement, and education opportunities.

Surveys by Reef Check Oregon revealed several areas where urchin barrens have replaced healthy kelp forests, and ORKA organized more than 50 scuba divers and free divers who have contributed to various restoration events. ORKA's first kelp forest restoration work began at Nellies Cove just

outside of Port Orford, and the most recent event occurred at Chief Kiawanda Rock (aka Haystack Rock) in Pacific City, with events planned for Macklyn Cove. Other sites include Cape Lookout, South Cove at Cape Arago, and more identified by the Oregon Coast Aquarium.

Continually monitoring and removing urchins from these restoration sites is the first step in a

multi-tool strategy that will also include actively outplanting cultivated kelp and potentially reintroducing the predatory sunflower sea star. This work aims to protect, restore, and maintain kelp forests to ensure continued production of wild kelp spores necessary for a larger-scale recovery. It also provides opportunities to understand future kelp forest ecosystem changes.

Restoration Co-Culture

With the help of Oregon Sea Farms and Oregon Dulse, and with funding from Oregon Sea Grant, a purple sea urchin and dulse (edible red seaweed) co-culture aims to determine the viability of “fattening” sea urchins to be brought to commercial markets. In the next phase of this project, commercial urchin diver partners will supply urchins to restaurants, wholesalers, and directly to adventurous and eco-conscious consumers. ORKA is also incorporating uni from cultured urchins as a larger part of Oregon’s sustainable seafood industry, subsequently allowing the average seafood lover to participate in restoration science.

State of Oregon’s Kelp Forests

ORKA will soon launch an ambitious coast-wide survey and status report of Oregon’s ecosystems, to determine a kelp forest restoration plan. The Oregon Kelp Forest Initiative is receiving \$945,000 in congressional funding to support these aerial and underwater surveys of Oregon’s kelp forests along the entire coast. The surveys will help plan the future of kelp restoration and identify candidate sites for more intensive restoration work in coming years.

A Kelp Forest Stewardship Program

Ultimately, the goal of the Oregon Kelp Alliance is to build the capacity needed to support an ongoing kelp forest stewardship program. One aim of this program will be to employ trained practitioners, divers, drone pilots, kelp foresters, and others. Utilizing these practitioners in an ongoing, community based, inclusive effort will promote and maintain healthy kelp forests in Oregon and beyond.

PHOTOS © BRANDON COLE

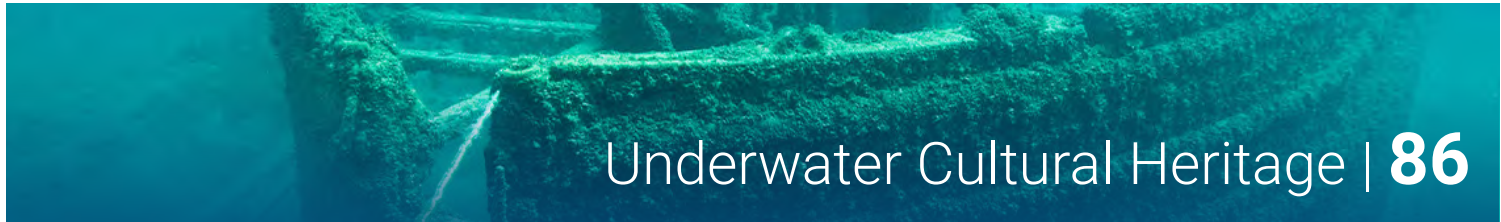
LEARN MORE

For more information, please visit:
oregonkelp.com

SPECIAL PROJECTS



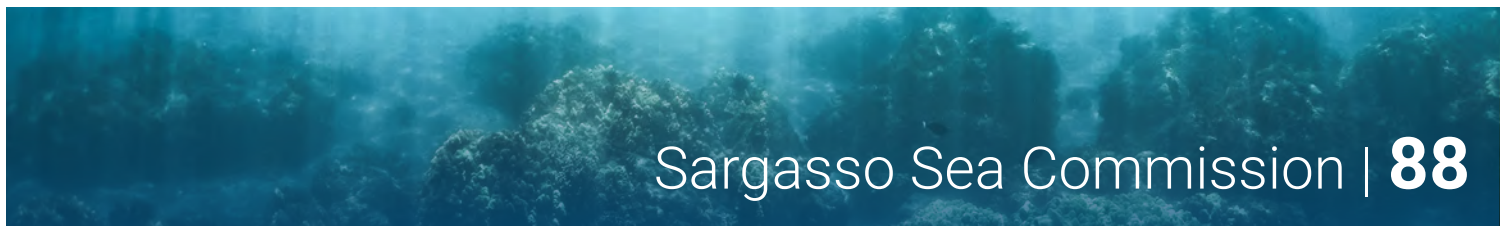
Ocean Studies Board | **86**



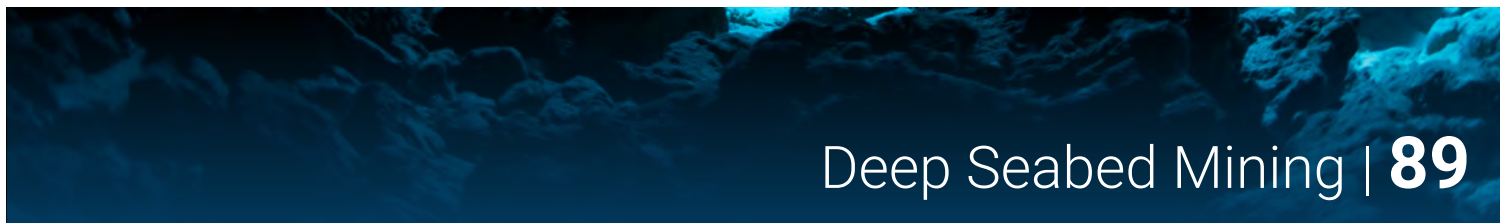
Underwater Cultural Heritage | **86**



Confluence Philanthropy | **87**



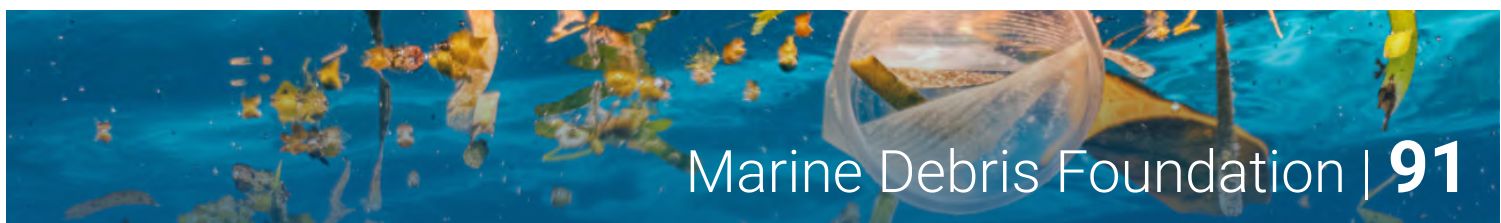
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OCEAN STUDIES BOARD

Our president, Mark J. Spalding, continues to serve on the Ocean Studies Board of the National Academies of Sciences, Engineering, and Medicine (NASEM). During the better half of the year, the Board was focused on plans related to the U.S.'s involvement in the UN Decade of Ocean Science for Sustainable Development. And, in January 2022, the Board released a report on *Cross-Cutting Themes for U.S. Contributions*. Mark was also successful in encouraging the Ocean Studies Board to re-write and republish the highlights summary of a [December 2021 report](#), "A Research Strategy

for Ocean-based Carbon Dioxide Removal (CDR) and Sequestration", to make it more accurate and avoid misuse by advocates of mechanical and chemical CDR methods. CDR is a process that seeks to help remove and store excess carbon dioxide from the atmosphere. At The Ocean Foundation, we support nature-based solutions and reliable storage methods – such as protecting and restoring coastal mangroves, seagrass beds, and kelp forests – which provide a number of ecosystem benefits in addition to CDR.

UNDERWATER CULTURAL HERITAGE

We have been increasing our work, and strengthening current partnerships, within the realm of Underwater Cultural Heritage (UCH). One of The Ocean Foundation's Senior Fellows, Ole Varmer, expanded our UCH footprint by advising on a project in partnership with the Major Projects Foundation. Together, we aided the Marshall Islands in receiving United Nations Educational, Scientific and Cultural Organization (UNESCO) legal status – and supervised the work of two paid interns on a project to update UCH law in the United States.

Our staff also initiated a new effort to obtain UNESCO mixed status under the World Heritage Convention for the Arrecife de Alacranes National Park and UNESCO Biosphere Reserve. The reef, known as the best-conserved coral reef ecosystem in the Gulf of Mexico, has 38 documented shipwrecks dating all the way back to the 16th century. We began conversations with CONANP, which manages the reef, about the possibility of expanding its research footprint and protective status. To spearhead this project, we are in contact with

Mexican archeologist Helena Barba. With Ole Varmer also advising us on the project, our first step is to lobby the Mexican government to add Alacranes to the tentative national list

for new applications. The national park is part of our RedGolfo network, focusing on marine protected areas in Cuba, Mexico, and the United States.

CONFLUENCE PHILANTHROPY

Confluence Philanthropy is a network of public, private, and community foundations in partnership with individual donors to transform investing by aligning capital with sustainability, equity, and justice. The Ocean Foundation has been a member of Confluence Philanthropy

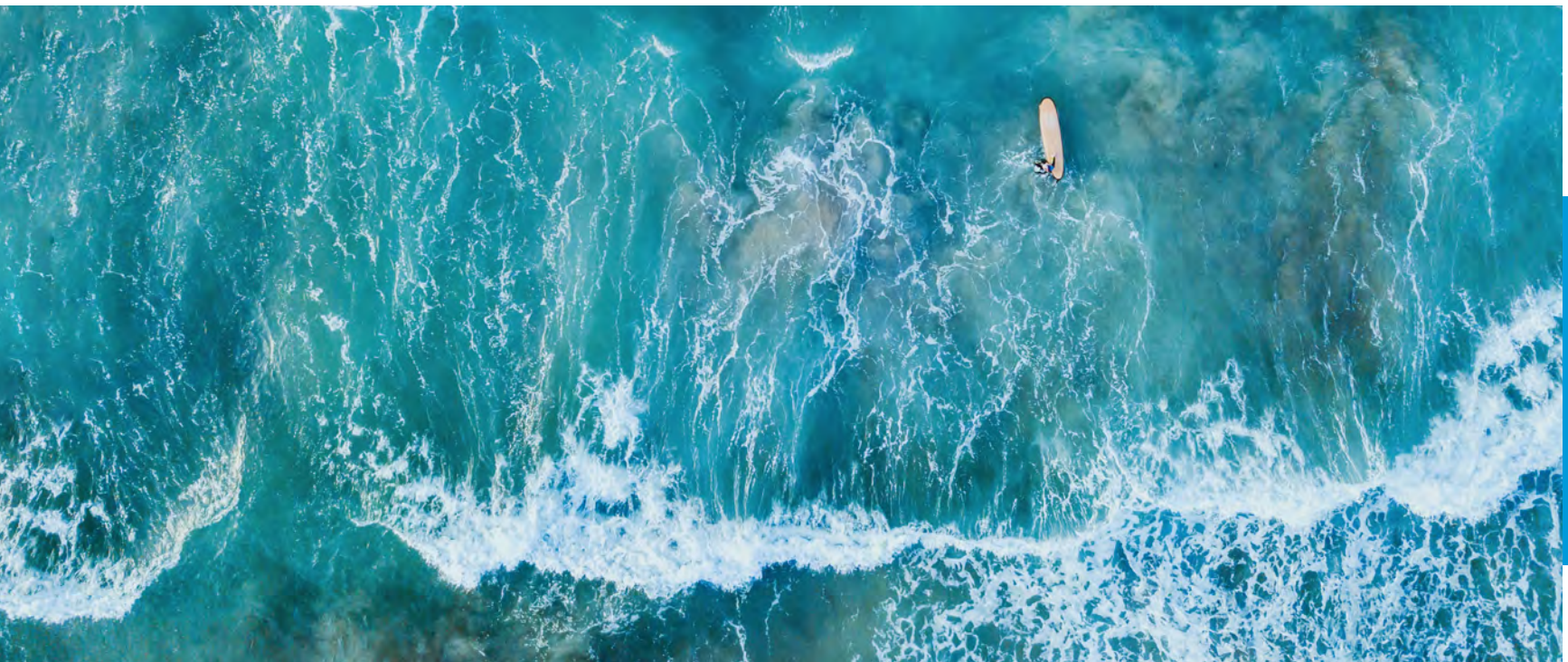
since its founding in 2011. In March 2022, Mark completed six years as a member of the Board during which time he served two years as chair and oversaw the development of a new mission, vision, and strategic plan for the organization.



SARGASSO SEA COMMISSION

This year, our President represented The Ocean Foundation at two Sargasso Sea Commission meetings. On August 25, 2021, the Commission's meeting focused on projects related to fisheries, shipping, the seabed, migratory species, mapping and monitoring, and fundraising. Mark played a key role in the Commission's analysis of new rules of procedure, proposed by signatories to the **Hamilton Declaration**.

In October 2021, the fall meeting of the Sargasso Sea Commission included updates to several fisheries projects and highlighted the completion of the Global Environment Facility (GEF) validation workshop, the first-ever GEF grant designed to address governance of a high seas ecosystem. The meeting also covered a workshop on the Range States of the American Eel, an International Union for Conservation of Nature high seas workshop, shipping projects, and Biodiversity Beyond National Jurisdiction (BBNJ).



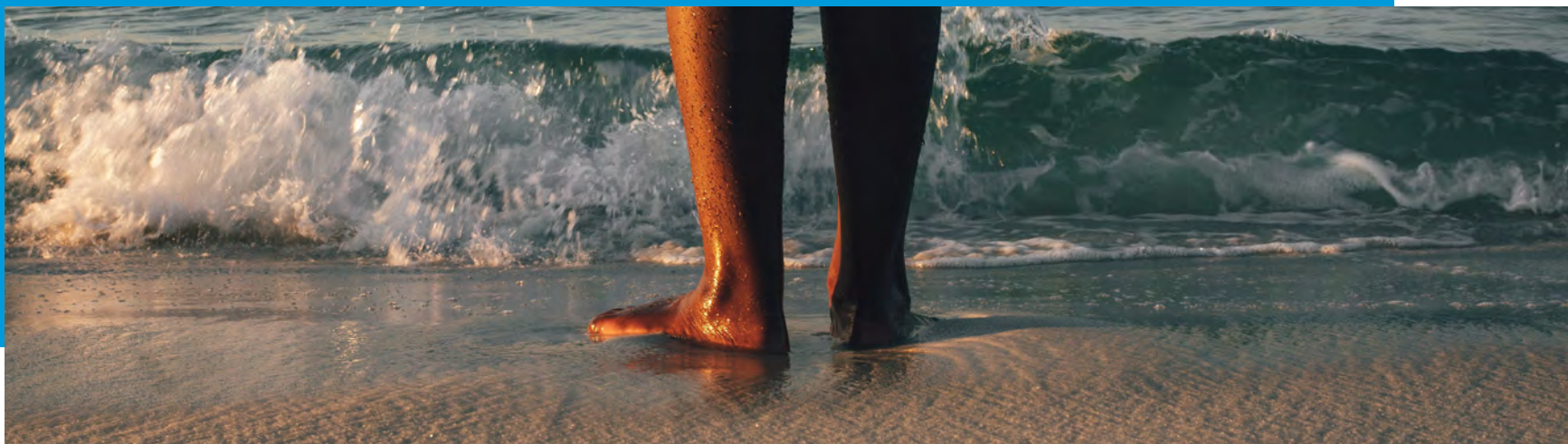
DEEP SEABED MINING

Deep Seabed Mining (DSM) is a prospective global industry that targets mineral deposits from the seafloor – including manganese, copper, cobalt, zinc, and rare earth metals. Regulations for mineral exploitation beyond national jurisdiction have not yet been established, but are currently being developed by the International Seabed Authority (ISA) under the United Nations Convention on the Law of the Sea.

Commercial-scale mining of the ocean floor will likely impact deep-sea ecosystems and cultural heritage. And the ISA is now against the clock to finalize regulations by July 2023. This dovetails with a false narrative – that deep-sea minerals are needed to decarbonize our global energy

supply without destroying indigenous lands or supporting inhumane labor practices.

Through our DSM lead and Legal Officer, Bobbi-Jo Dobush, The Ocean Foundation is working with the Deep Sea Conservation Coalition to support a moratorium (a temporary prohibition) on DSM, by shifting the narrative to the threat DSM poses to our livelihoods. Leveraging our memberships, advisory roles, and our staff's experience in the private sector, we have been partnering with Member States of the ISA, NGOs, scientific organizations, and other high-level stakeholders to tell the scientific, financial, and legal truth about DSM. Ocean literacy is at the very core of this work.





ROCKEFELLER ASSET MANAGEMENT

In September 2021, Rockefeller Asset Management (RAM), a division of Rockefeller Capital Management, launched the **Rockefeller Climate Solutions Fund** to invest in companies focused on climate change solutions. Launched with nearly \$100M in assets, the fund was converted from a Limited Partnership structure with the same investment objective and a 9-year track record.

The Ocean Foundation has collaborated with RAM since 2011 on the Rockefeller Climate Solutions Strategy to provide specialized insight on marine trends, risks, opportunities, and an analysis of coastal and ocean conservation initiatives. Our team serves as advisors and research collaborators, to help bridge the gap between science and investing and

contribute to idea generation, research, and engagement. Rockefeller Climate Solutions Fund is co-managed by Casey Clark, CFA, and Rolando Morillo, who lead RAM's thematic equity strategies, leveraging the intellectual capital built from RAM's three decades of Environmental, Social & Governance (ESG) investing experience.

To commemorate World Ocean Day on June 8, 2022, our president Mark J. Spalding also guest authored for RAM's latest edition of their *Engaging Ideas* commentary series: "Investment Opportunities in the Blue Economy". In the article, Mark discussed the shipping-related industry, its role in the blue economy, and opportunities for investors.

MARINE DEBRIS FOUNDATION

In April 2022, 12 individuals were selected to be on the inaugural Board of Directors for a new charitable and nonprofit organization, the **Marine Debris Foundation**. Two months later, the Marine Debris Foundation kicked off their very first Board meeting. The virtual meeting introduced the Board Members who would steer the Foundation towards identifying, assessing, and preventing marine debris and its effects on our ocean.

Marine debris is defined as any persistent solid material that is manufactured or processed and directly or indirectly, intentionally or unintentionally, disposed of or abandoned into marine environments. It has swiftly become one of the most widespread pollution issues worldwide. In 2006, the Marine Debris Act established the National Oceanic and Atmospheric Administration (NOAA) Marine Debris Program (MDP) as the federal lead on marine debris issues for the U.S. government.

Since then, Congress has made significant amendments to refine the MDP's mission.

One such amendment, the Save Our Seas 2.0 Act, established the Marine Debris Foundation to enhance the U.S.'s domestic and international engagement to address and prevent marine debris. To help get the Foundation off the ground, The Ocean Foundation is supporting the Marine Debris Foundation's legal and funding processes. We're organizing quarterly Board meetings, formalizing headquarters and meeting locations, reviewing grant proposals and administering awards, assisting in hiring staff, managing branding and communications, and more. Over the next two years, we are excited to position the Marine Debris Foundation as its own independent foundation with a fully functioning Board, grant-making capabilities, and revenue sources. By doing so, we can work together to reduce marine debris worldwide.





THE 2022 UNITED NATIONS OCEAN CONFERENCE

Following a hiatus on in-person events since the start of the pandemic, the midpoint of what had been deemed a “critical year for the ocean” was marked by the **2022 United Nations Ocean Conference** in Lisbon, Portugal. From June 27 to July 1, 2022, over 6,500 attendees representing nonprofits, private entities, governments, and other stakeholders joined in jam packed commitments, conversations, and conference events. At The Ocean Foundation, our delegation was prepared to **present on and tackle a suite of important topics**, ranging from plastics to global representation.

Our delegation reflected our diverse organization, with eight staff members addressing plastic pollution, blue carbon, ocean acidification, deep sea mining, equity in science, ocean literacy, ocean-climate nexus, blue economy, and ocean governance.

After the conference, we were able to reflect on the partnerships forged, the global commitments made, and the incredible learning that took place within five days.

OUR FORMAL COMMITMENTS FOR UNOC 2022

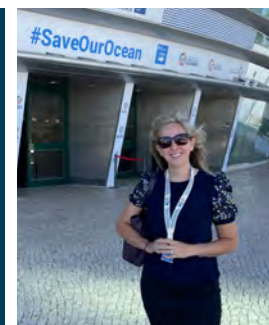
Support **large-scale coastal habitat restoration and conservation** in the Wider Caribbean Region



Create **long-term resilience to ocean acidification** through training, equipment, and network-building



Address **systemic inequity in ocean science capacity** through EquiSea



Advance the **Climate Strong Islands Network (CSIN)**

Stressing the Importance of Ocean Science Capacity

Discussions about the capacity needed to carry out ocean science and take action were woven into conference events throughout the week. Our official side event, **“Ocean Science Capacity as a Condition to Achieving SDG 14: Perspectives and Solutions,”** was moderated by Program Officer Alexis Valauri-Orton and featured a suite of panelists who shared perspectives on removing barriers to equity in the ocean community.

The U.S. Department of State’s Deputy Assistant Secretary for Oceans, Fisheries and Polar Affairs, Professor Maxine Burkett, provided inspiring opening remarks. And, The Pacific Community’s Dr. Katy Soapí and IOC-UNESCO’s Henrik Enevoldsen highlighted the importance of cultivating strong partnerships

prior to delving into work. Dr. Enevoldsen stressed that you can never invest enough time in finding the right partners, while Dr. Soapí emphasized that a partnership needs time to develop and form trust before progress really begins. Dr. J.P. Walsh from the University of Rhode Island recommended building in time for fun into in-person activities, such as an ocean swim, to help catalyze meaningful memories and relationships. Other panelists, TOF Program Officer Frances Lang and Damboa Cossa from Eduardo Mondlane University in Mozambique, emphasized the importance of bringing social sciences into capacity building, and taking account of local context – including education, infrastructure, conditions, and access to technology.





To further bolster support for ocean science capacity, The Ocean Foundation announced a new initiative to create a Funders Collaborative in support of the UN Decade of Ocean Science for Sustainable Development. Announced formally at the UN Ocean Decade Forum event, the collaborative aims to strengthen the Decade of Ocean Science by pooling funding and in-kind resources to support capacity development, communications, and co-design of ocean science. Founding members of the collaborative include the Lenfest Ocean Program of the Pew Charitable Trust, the Tula Foundation, REV Ocean, Fundação Grupo Boticário, and Schmidt Ocean Institute.

President Mark J. Spalding was also invited by the Governments of Spain and Mexico to speak on how ocean observing data is critical for coastal resilience and a sustainable blue economy, as part of an official side event, "Science Towards a Sustainable Ocean by 2030".



Calling for a Deep Seabed Mining Moratorium

Clear concerns regarding deep seabed mining (DSM) were raised throughout the conference, and we placed ourselves at the head of discussions. The Ocean Foundation engaged in support of a moratorium (a temporary prohibition) unless and until DSM could proceed without harm to the marine environment, loss of biodiversity, threat to our tangible and intangible cultural heritage, or danger to ecosystem services and global livelihoods.

Our staff was present at more than a dozen DSM related events, from intimate discussions, to official Interactive Dialogues, to a mobile dance party urging us to #lookdown and appreciate the deep ocean while advocating for a DSM ban. We learned and shared the best available science, conversed on the legal underpinnings of DSM, drafted speaking points and interventions, and strategized with

colleagues, partners, and country delegates from all over the globe. Various side events focused specifically on DSM – and on the deep ocean, its biodiversity, and the services it provides for our planet.

The Alliance Against Deep Seabed Mining was launched by Palau, and joined by Fiji and Samoa – with the Federated States of Micronesia joining later on. Dr. Sylvia Earle advocated against DSM in formal and informal settings; an interactive dialogue on UNCLOS erupted into applause when a youth delegate questioned how decisions with intergenerational implications were being made without youth consultation; and France's President Macron surprised many by calling for a legal regime to stop DSM, saying: "we have to create the legal framework to stop high seas mining and not to allow new activities that endanger ecosystems."

“ With support from the U.S. Department of State and the Government of Sweden, we have invested more than \$3M [since 2016] in ensuring equitable distribution of OA monitoring capacity. We designed a kit that lowered the cost of monitoring by 90% and have distributed 17 kits to 16 countries. We are currently working in partnership with NOAA, The Pacific Community, and the University of the South Pacific to establish the Pacific Islands OA Centre to serve as a regional, locally-staffed resource for the Pacific Islands.

Alexis Valauri-Orton | Program Officer



Spotlighting Ocean Acidification

The ocean plays an important role in climate regulation. Yet, it also feels the effects of increasing carbon dioxide emissions. Changing ocean conditions was an important topic throughout the UN Ocean Conference, with ocean warming, deoxygenation, and acidification at the forefront of conversations.

An Interactive Dialogue brought together U.S. Special Presidential Envoy for Climate John Kerry and The Ocean Foundation’s partners, including Global Ocean Acidification Observing Network Co-chair Dr. Steve Widdicombe and Secretariat for the International Alliance to Combat Ocean Acidification Jessie Turner, as chair and panelist, respectively.

Program Officer Alexis Valauri-Orton also made a formal intervention on behalf of The Ocean Foundation, noting our ongoing support for

the tools, training, and resources that enable increased ocean acidification monitoring in the regions that benefit most from these data.



Creating Accessible Ocean Action Worldwide

The Ocean Foundation was involved with several virtual events that were available to conference participants around the world. On behalf of our staff, Frances Lang presented on a virtual panel alongside esteemed panelists from Edinburgh University, Patagonia Europe, Save The Waves, Surfrider Foundation, and Surf Industry Manufacturers Association.

The event, organized by Surfers Against Sewage, brought together leading campaigners, academics, NGOs, and water sports representatives to discuss how grassroots action and citizen science can be used to influence local decisions, national policy, and the international debate to protect and restore our seas. The speakers discussed the importance of accessible ocean action for all

levels of society – from coastal data collection led by community volunteers, to K-12 marine education driven by partnerships and local leadership.

The Ocean Foundation also organized an English and Spanish virtual event focused on reducing disruption of the climate through restoration of marine and coastal ecosystems. Program Officer Alejandra Navarrete facilitated a dynamic conversation about implementing nature-based solutions on a regional scale and at the national level in Mexico. Program Officer Ben Scheelk and other panelists shared how mangroves, coral reefs, seagrasses, and other blue carbon ecosystems provide important services for climate change adaptation and mitigation.



Speaking on High Seas Ocean Governance

President Mark J. Spalding, in his role as Sargasso Sea Commissioner, spoke at a side event focused on the SARGADOM project for “Hybrid governance in the High Seas”. ‘SARGADOM’ combines the names of the project’s two focus sites – the Sargasso Sea in the North Atlantic, and the Thermal Dome in the Eastern Tropical Pacific. This project is financed by the Fonds Français pour l’Environnement Mondial.

The Thermal Dome in the Eastern Tropical Pacific Ocean and the Sargasso Sea in the North Atlantic are two initiatives emerging as pilot cases at the global level – aimed at developing new modes of governance that combine a regional approach and a global approach, to contribute to the protection of biodiversity and ecosystem services in the high seas.



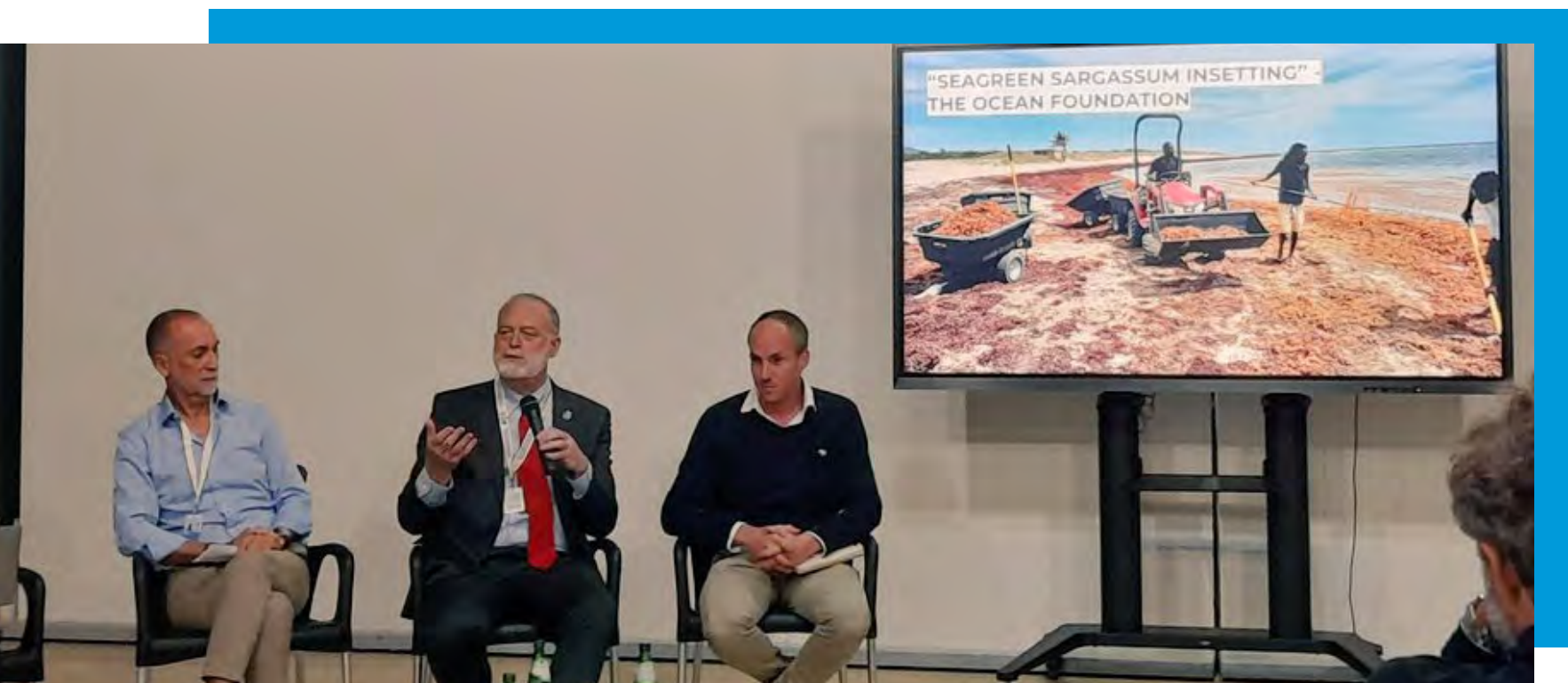
Promoting the Ocean-Climate Nexus

In 2007, The Ocean Foundation helped co-found the Ocean-Climate Platform. Mark J. Spalding joined the Platform during the UN Ocean Conference on June 30, to talk about the need for an International Panel for Ocean Sustainability. This Panel would allow for the assessment of the current and future state of the ocean, in a manner similar to the International Panel on Climate Change. Immediately after this, the Ocean-Climate Platform showcased ambitious ocean initiatives that are accessible, scalable, and sustainable – including The Ocean Foundation’s sargassum insetting efforts through our Blue Resilience Initiative.

The smaller unscheduled and ad hoc meetings during the conference were tremendously

helpful, allowing us to meet with partners and colleagues throughout the week. Mark J. Spalding was one of a group of ocean conservation NGO CEOs who met with the White House’s Council on Environmental Quality, and the Director of the White House Office of Science and Technology. Mark also spent time in “High Level” meetings with our partners at The Commonwealth Blue Charter to discuss a fair, inclusive, and sustainable approach to ocean protection and economic development.

In addition to these engagements, we sponsored a number of other events. And, our staff facilitated critical conversations around plastic pollution, marine protected areas, ocean acidification, climate resilience, international accountability, and industry engagement.





Looking Back to Move Forward

The theme of the 2022 UN Ocean Conference was “Scaling up ocean action based on science and innovation for the implementation of Goal 14: stocktaking, partnerships and solutions.” There were **notable achievements** related to this theme, including increased momentum and attention to the perils of ocean acidification, the restorative potential of blue carbon, and the risks of DSM. Women were an undeniably powerful force throughout the conference, with female-led panels standing out as some of the most vital and passionate conversations of the week. Our own delegation consisted of about 90% women.

We also recognized certain areas where we need to see more progress, improved access, and greater inclusivity. In the interventions, informal meetings, and side events, those from less-resourced countries usually had the most substantive, actionable, and important items to discuss. But, we noticed a chronic lack of representation on the official panels at the event.

Our hope is to see more representation, inclusivity, and action stemming from the

large investments in marine protected area management, stopping IUU fishing, and preventing plastic pollution. We also hope to see a moratorium or pause on DSM in the next year.

Proactive stakeholder engagement, and robust and substantive interaction with those stakeholders, will be necessary for all attendees of the UN Ocean Conference to achieve everything we set out to do. For The Ocean Foundation, it is particularly clear that the work we are doing is vitally needed.

The “critical year for the ocean” will continue throughout 2022, with the Mangrove Congress of America, COP27, and the UN Biodiversity Conference. Throughout these and other global events, we hope to continue to advocate to ensure voices are heard – not only the voices of those with the power to make change, but also of those who are most affected by climate change and ocean destruction. And, we hope to continue to bring our 20 years of expertise into the future of ocean conservation.

OUR FINANCIALS

Statement of Financial Position

ASSETS

CURRENT ASSETS

Cash and cash equivalents	\$2,355,211
Investments	\$937,370
Receivables	\$2,687,726
Prepaid expenses	\$45,736
	\$6,026,043

PROPERTY AND EQUIPMENT

Furniture, equipment & software	\$149,449
Vehicles	\$17,895
	\$167,344
Less: accumulated depreciation	(\$135,116)

OTHER ASSETS

Investment (interest in undeveloped land)	\$9,300,000
Receivables (net of current)	\$1,323,272
Intangible assets (net)	\$22,980
Security deposits	\$11,161
	\$10,657,413

TOTAL ASSETS: \$16,715,684

LIABILITIES AND NET ASSETS

CURRENT LIABILITIES

Accounts payable & accrued expenses	\$769,830
Tenant security deposit	\$3,100
Passthru grant	\$15,012
Derred revenue	\$62,979
Refundable advance	\$124,480
Charitable gift annuity (current portion)	\$620
	\$1,003,021

OTHER LIABILITIES

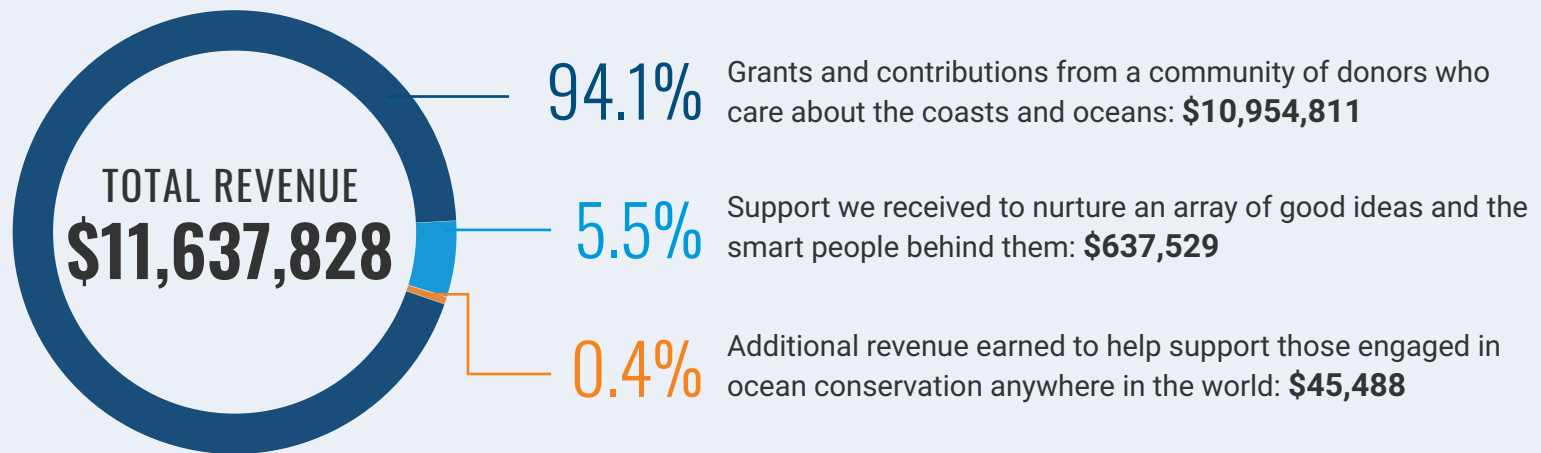
Deferred rent liability (net of current)	\$55,848
Charitable gift annuity (net of current)	\$1,915
	\$57,763

NET ASSETS

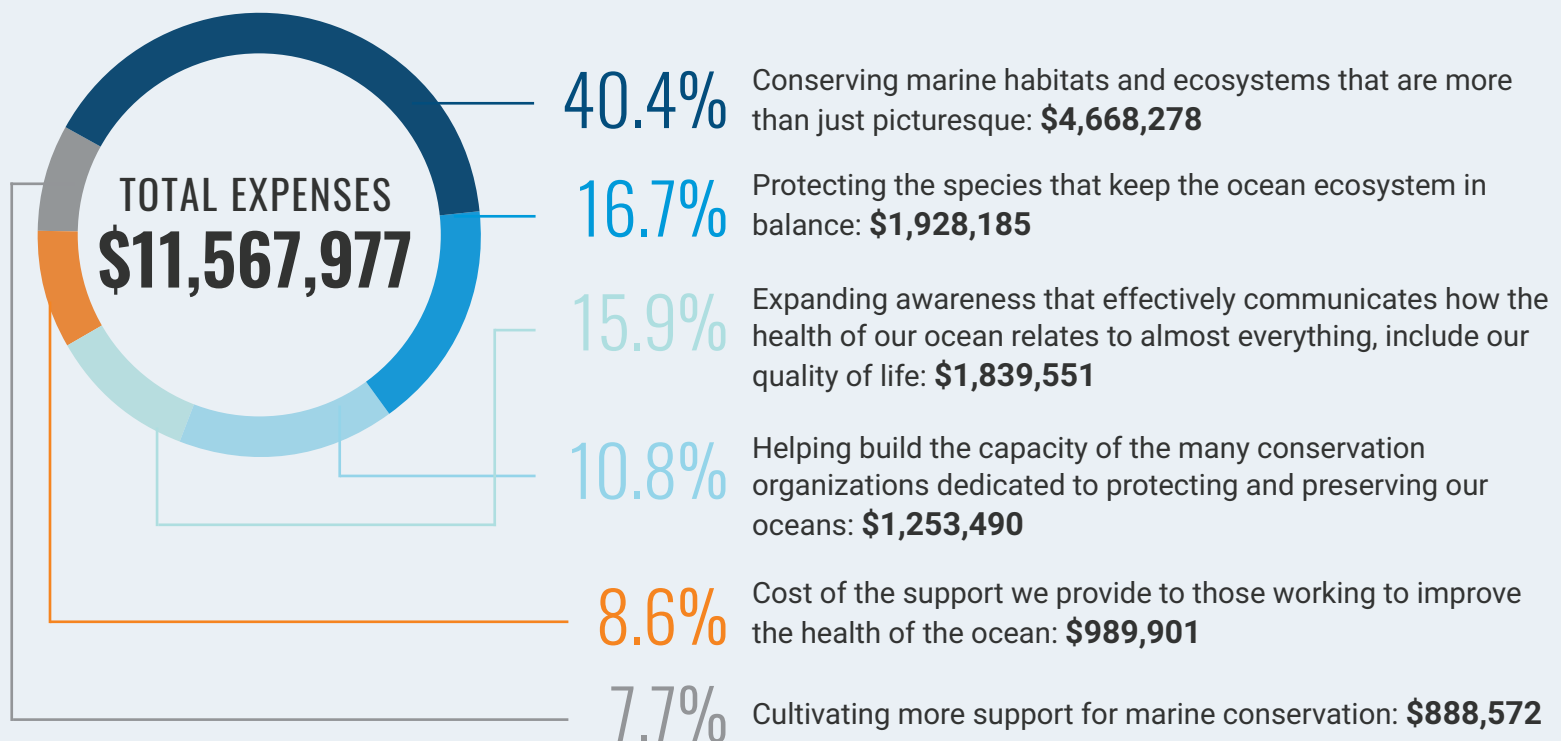
Without Donor Restriction	\$11,829,937
Undesignated	\$713,830
Designated by Board	\$12,543,767
With Donor Restriction	\$3,824,963
	\$15,654,900

TOTAL LIABILITIES & NET ASSETS: \$16,715,684

Revenue to Support Marine Conservation



Spending by Function

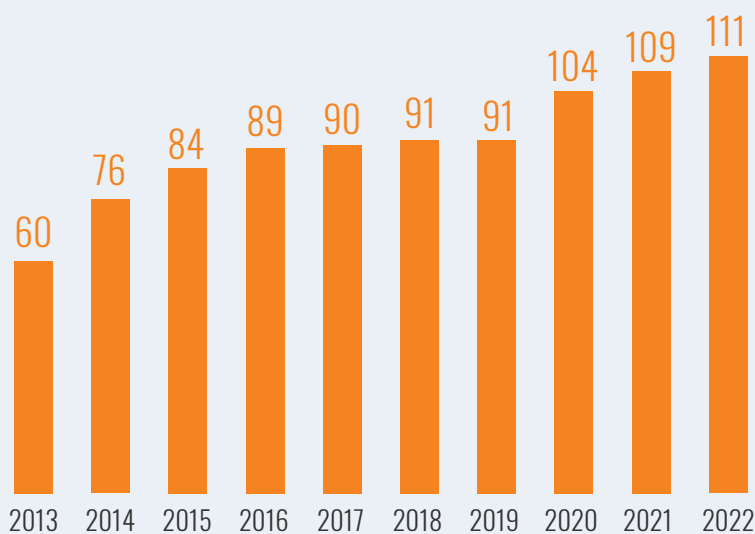


Statement of Activities

	WITHOUT DONOR RESTRICTION	WITH DONOR RESTRICTION	TOTAL
REVENUE AND SUPPORT			
Grants & contributions	\$260,864	\$10,880,264	\$11,141,128
Program service revenue	\$637,529		\$637,529
Rental income	\$38,340		\$38,340
Investment income - net realized and unrealized gain/(loss)	(\$186,327)		(\$186,317)
Investment income - other	\$7,148		\$7,148
	\$757,564	\$10,880,264	\$11,637,828
Net assets released from restriction:			
Satisfaction of program restrictions	\$10,369,199	(\$10,369,199)	-
TOTAL REVENUE AND SUPPORT:	\$11,126,763	\$511,065	\$11,637,828
EXPENSES			
Program Services:			
Protecting Marine Habitats	\$4,668,278	-	\$4,668,278
Protecting Species of Concern	\$1,928,185	-	\$1,928,185
Building Marine Community Capacity	\$1,253,490	-	\$1,253,490
Ocean Literacy	\$1,839,551	-	\$1,839,551
	\$9,689,504		\$9,689,504
Support Services:			
Management & general	\$989,901	-	\$989,901
Fundraising	\$888,572	-	\$888,572
	\$1,878,473		\$1,878,473
TOTAL EXPENSES:	\$11,567,977	-	\$11,567,977
CHANGE IN NET ASSETS (DEFICIT)			
	(\$441,214)	\$511,065	\$69,851
Beginning net assets	\$12,271,151	\$3,313,898	\$15,585,049
ENDING NET ASSETS	\$11,829,937	\$3,824,963	\$15,654,900

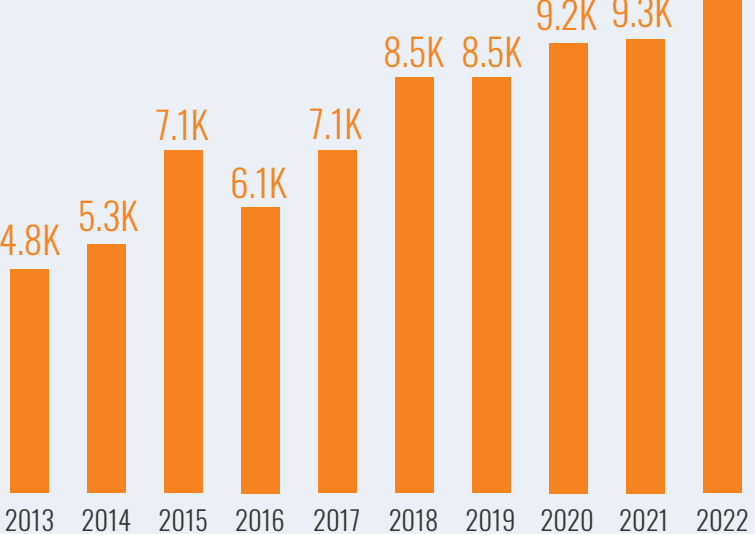
Project Growth

TOTAL NUMBER OF ACTIVE PROJECTS AT FISCAL YEAR END

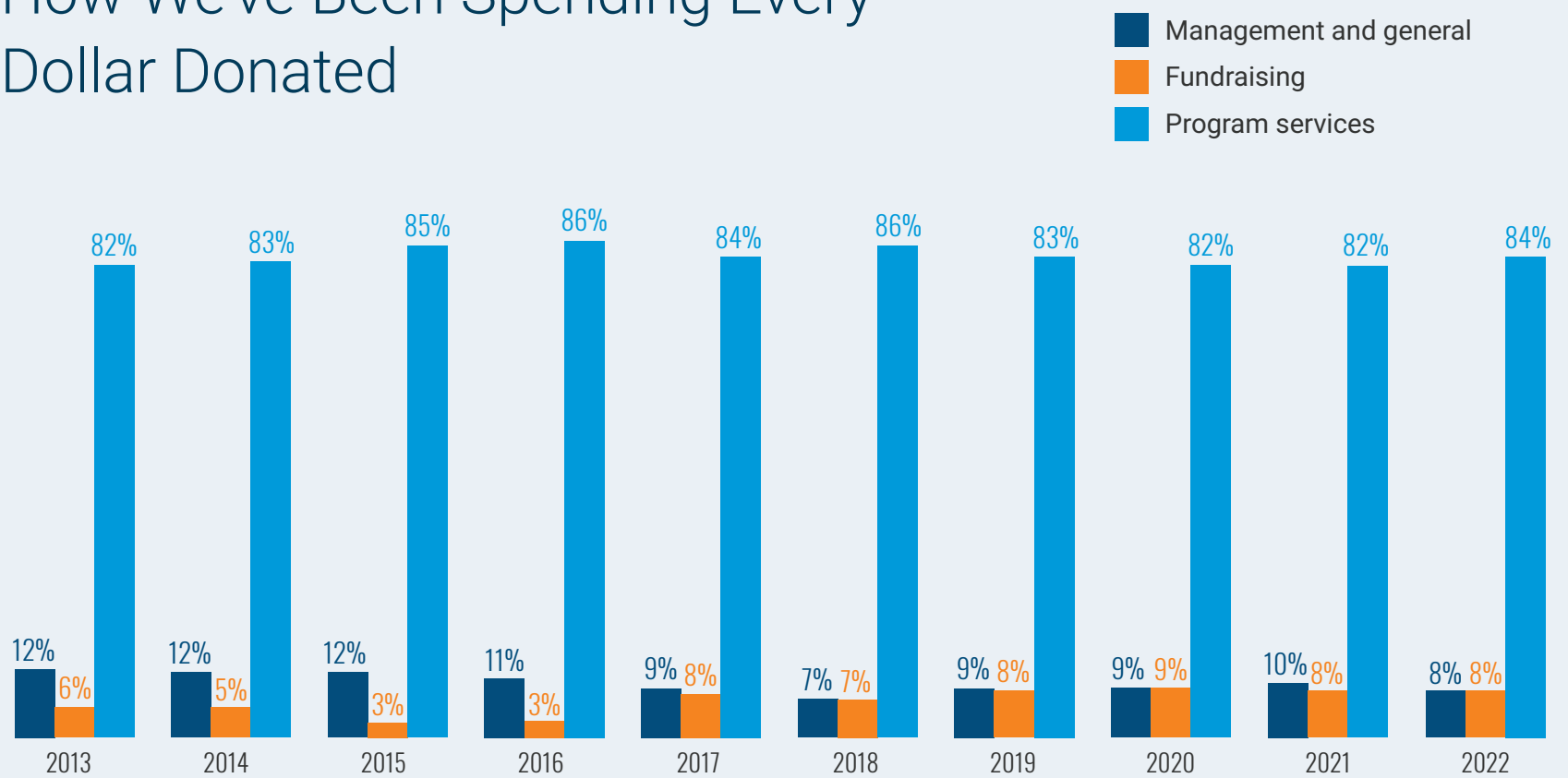


Revenue Growth

TOTAL TOF REVENUE AT FISCAL YEAR END (IN MILLIONS)

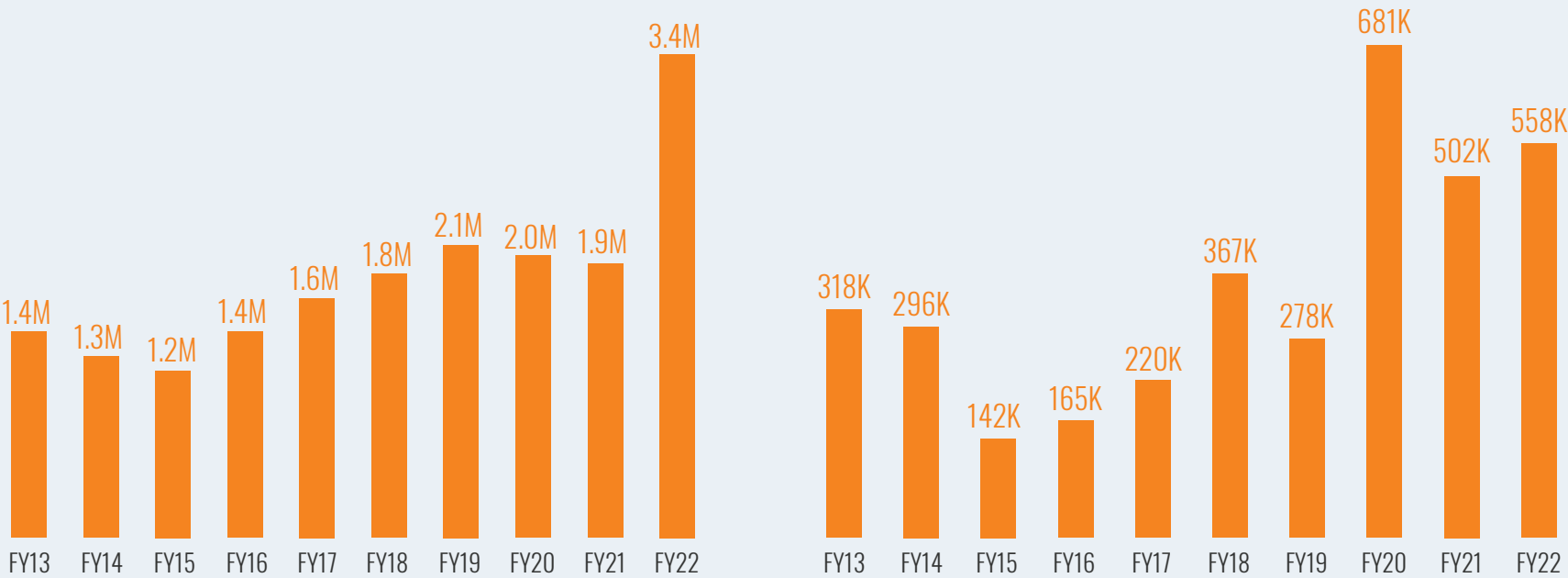


How We've Been Spending Every Dollar Donated

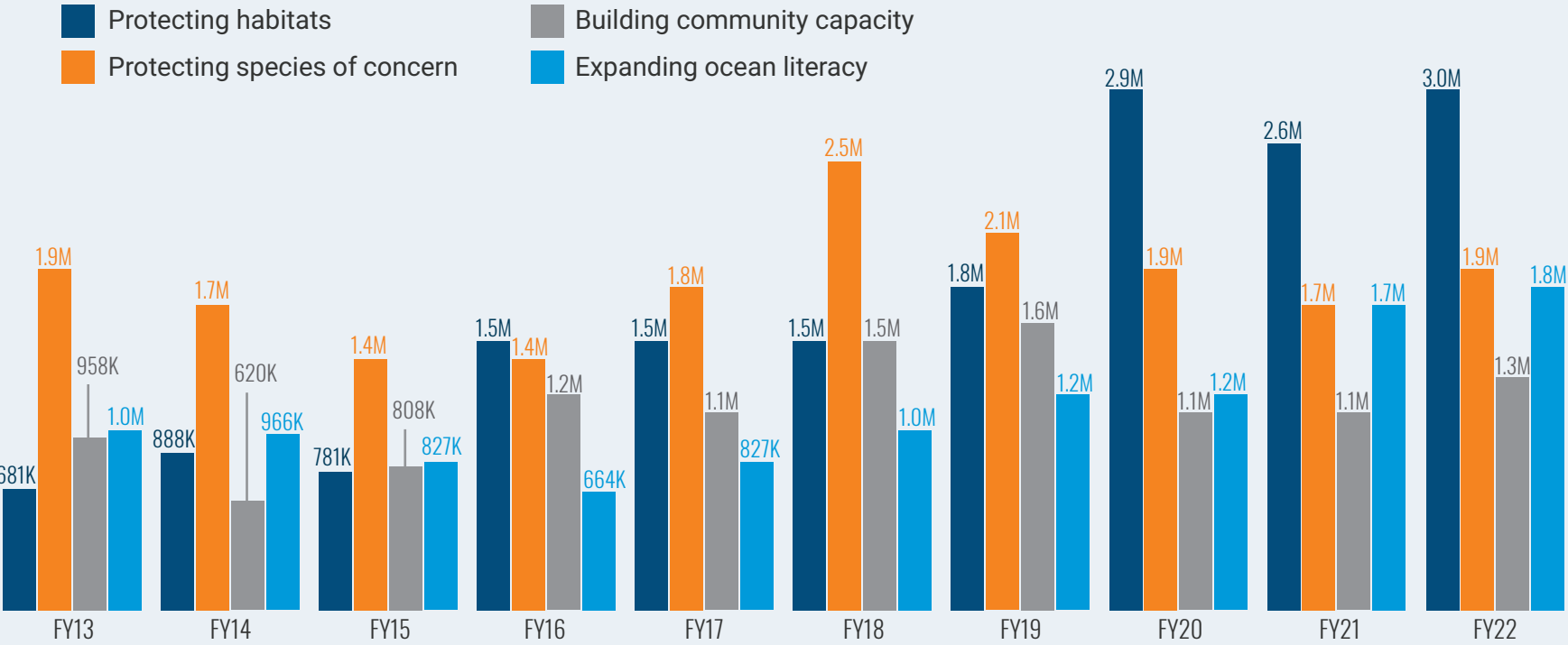


Funds Spent Internationally

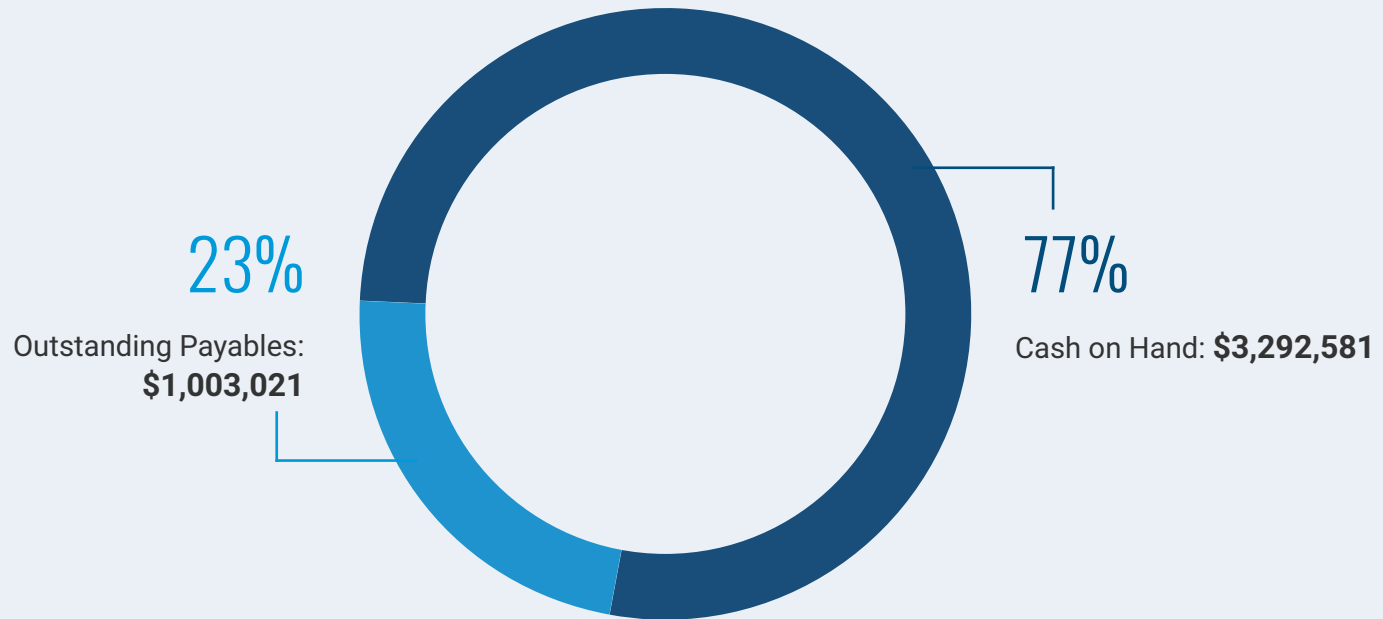
Funds Raised for “71%”



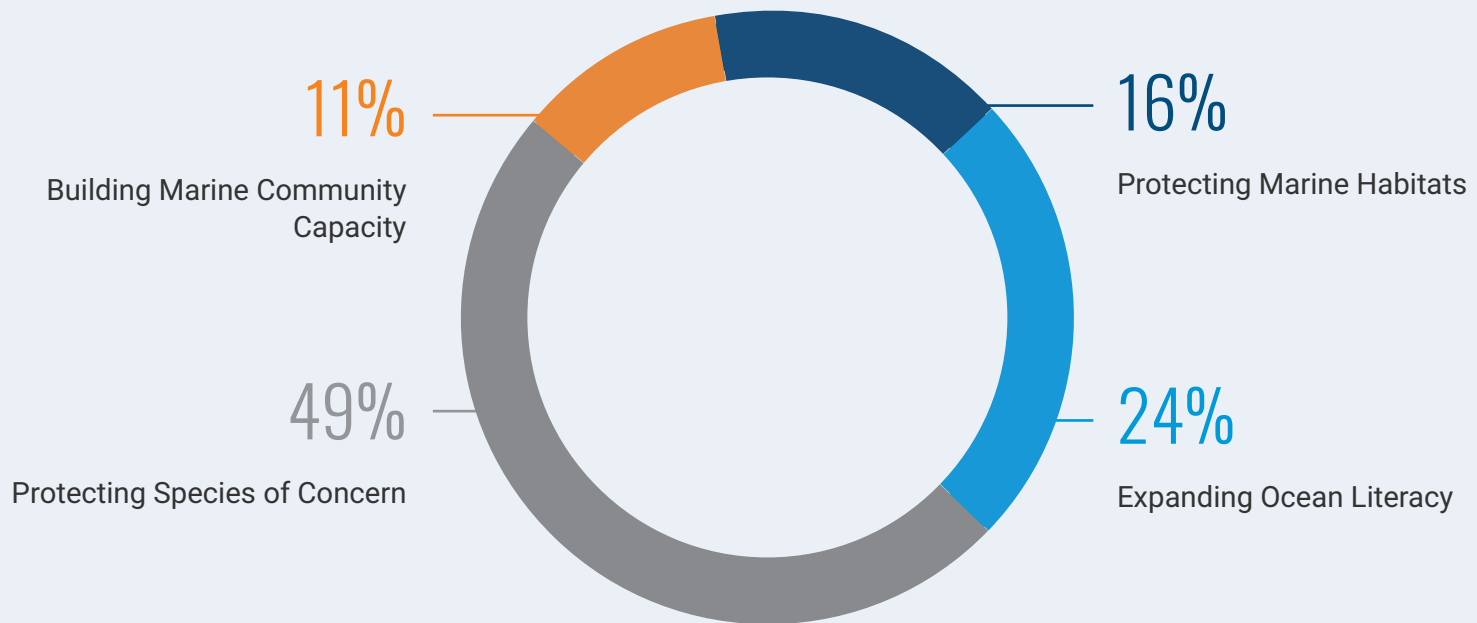
Funds Spent...



Cash vs. Payables



Major Program Revenue



OUR COMMUNITY

Fiscally Hosted Projects

- Alabama River Diversity Network
- Big Ocean
- Blue Climate Solutions
- Deep Sea Mining Campaign
- earthDECKS.org Ocean Network
- Eastern Pacific Hawksbill Initiative (ICAPO)
- Friends of Bello Mundo Consulting, LLC
- High Seas Alliance
- Inland Ocean Coalition
- International Fisheries Conservation Project
- Inuit Initiatives
- Laguna San Ignacio Ecosystem Science Program (LSIESP)
- Navigating Our Way to Solutions in Marine Conservation
- Ocean Connectors
- Ocean Revolution
- Oregon Kelp Alliance
- Redfish Rocks Community Team
- San Basilio Sanctuary
- Saving Ocean Wildlife
- SEVENSEAS Media
- Shark Advocates International
- St. Croix Sea Turtle Project
- Superfish Tracking Research Partnership
- SURMAR-ASIMAR
- Tag-A-Giant
- The Anchor Coalition
- The LiVBLUE Fund
- The Ocean Project
- The Science Exchange
- The Wise Laboratory Field Research Program
- Tourism Action Coalition for a Sustainable Ocean
- Tracking Turtles Thru Time
- Who Saved the Whale Lagoon
- Women in Polar Sciences

Friends of Funds

- Friends of Chumbe Island Coral Park
- Friends of Coastal Coordination
- Friends of Conservación ConCiencia
- Friends of Darwin 200 Project
- Friends of Deep Green Wilderness
- Friends of Don Hanson Foundation
- Friends of Game Genius
- Friends of Georgia Strait Alliance
- Friends of Grupo Tortuguero
- Friends of Havenworth Coastal Conservation
- Friends of La Tortuga Viva
- Friends of Oceanswell
- Friends of Organización SyCOMA
- Friends of Por El Mar
- Friends of Pro Esteros
- Friends of Rescate de Lobos Marinos
- Friends of Save the North Pacific Right Whale
- Friends of Sawfish Conservation Society
- Friends of Song Saa Foundation
- Friends of Sustainable Travel International
- Friends of The Nonsuch Expeditions

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- AlgaeNova
- Barrell Craft Spirits
- Club Med
- Dolfin Home Loans
- EcoBee/BeeSure
- Golden Acre Foods Ltd.
- Grogenics
- MamaP
- Marriott International
- Maya Luxe
- Mijenta Tequila
- Montraville Farms
- NILIT Ltd.
- NuKrew
- Onora Global
- PADI Travel
- Perkins Coie
- Philadelphia Eagles
- Roffé Accessories
- Salesforce
- Sheppard Mullin Richter & Hampton
- SKYY Vodka
- SOS Carbon
- Yachting Pages Magazine

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