

A sunset over the ocean with two sailboats and a bird in flight. The sun is low on the horizon, casting a warm orange glow across the sky and water. Two sailboats with dark sails are visible on the water, and a single bird is in flight in the upper right portion of the sky. The sky is filled with scattered clouds, some of which are illuminated by the setting sun.

**2012 ANNUAL REPORT**  
**BLUE OCEAN INSTITUTE**



“Julie Packard was among the first and remains among the foremost rivers of the ocean conservation movement.”

—Carl Safina

Monterey Bay Aquarium; Photo © Tom O’Neil

## DONOR PROFILE

### Julie Packard

#### The David and Lucile Packard Foundation

For more than 45 years, the David and Lucile Packard Foundation has worked with partners around the world to improve the lives of children, families and communities—and to restore and protect our planet. The Foundation’s work in science and conservation is having a profound impact through its fellowships in science and engineering, and its dedication to marine conservation and sustainable fisheries. Its vision for marine conservation has inspired a global legacy, and as importantly, a legacy close to home: the Packard children founded the acclaimed Monterey Bay Aquarium in 1984.

Julie Packard, co-founder, executive director and vice chairman of the Monterey

Bay Aquarium, works each day from her office on Cannery Row on the California coast. She understands the power of the human connection to wildlife and is passionate about sharing opportunities for others to experience it, too.

Her commitment to advancing ocean conservation has been demonstrated through the Aquarium and far beyond. She serves on numerous boards including the California Nature Conservancy, the Monterey Bay Aquarium Research Institute, and the David and Lucile Packard Foundation. She was also a member of the Pew Oceans Commission, which in 2003 issued its recommendations for a comprehensive overhaul

of national ocean policy. Julie Packard was the 1998 recipient of the Audubon Medal for Conservation.

**A note of deep gratitude:** The David and Lucile Packard Foundation’s long-term support has funded Carl Safina’s work continuously since 1990. First through his Living Ocean’s Program at National Audubon Society and then through Blue Ocean Institute, Packard’s generosity has made possible an enormous proportion of what Safina and his groups have accomplished and produced.

To read more, visit: [www.packard.org](http://www.packard.org) and [www.montereybayaquarium.org](http://www.montereybayaquarium.org).

**MISSION:** Blue Ocean Institute creates an original blend of science, art, and literature that inspires a deeper connection with nature, especially the sea. Our books, films, and educational programs instill hope and enlighten personal choices that help restore living abundance.



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Cover: On an overnight sail from Oahu to Kawai'i, Carl Safina witnessed how Pacific Voyagers brought ancient star-navigation sailing to the 21st Century as they crossed the Pacific and back. Explore Pacificoyagers.org. Photo © Carl Safina

This page: left; Humpback Whales traveling in Icy Straught, Alaska. Photo © Carl Safina  
 Right; Carl Safina surveying recovering reef in Palau. Photo © Susan Arnold

Back Cover: Humpback Whale breaches outside Alaska's Glacier Bay. Photo © Carl Safina



Carl Safina with Black-browed Albatross in the Falkland Islands. Photo © Patricia Paladines

## Over the Blue Ocean Horizon

**It used to be** that when at sea one could never see over the horizon. But now with GPS and satellite charts, Google Ocean—and of course, an experienced eye on the classic compass—we know where we're going and have an idea what we'll encounter. So what's over Blue Ocean's horizon, ten years into our voyage?

Our view of where we're going is: we'll do what it takes to be the best single source of informed, stimulating, inspired stories about the human relationship with nature, especially the sea.

We travel to the farthest latitudes and the most remote coasts on Earth to bring back the narrative of how humans are changing the world, and what the changes mean for wild things and for all of us. We travel into isolated fishing villages, voyage along distant ice-bound polar coasts, and explore tropical reefs. We are the ones who swim with giant tuna, encounter the world's largest nesting turtles, and fly with albatrosses. And with our books, articles, and films, we tell you what their day is like—and what they need from us.

Remaining the best doesn't mean remaining the same. Going into our tenth year, we have plans to greatly improve our reach and our relevance. People are changing not just the oceans. And the changes affect not just ocean wildlife. We will be increasingly looking at the larger relationship between humans and nature.

To do this, we will be working with and bringing aboard a small, select handful of fine writers, scientific experts, and leading conservationists. These Blue Ocean Fellows will bring already-established reputations to Blue Ocean Institute, making us a small but mighty powerhouse.

And in our partnership with Stony Brook University and its Center for Communicating Science (which I co-chair with Journalism Dean Howard Schneider), we will also help train the next generation of communicators.

This matters because our work inspires change. Change in personal lives, change in classrooms, change in policies.

And when people tell us that our work inspired them to change their life, that's quite enough to inspire us for another ten years and the horizons beyond.

*Carl Safina*

## ACHIEVEMENTS OF 2012 – THE YEAR IN REVIEW

At **Blue Ocean Institute**, we use science, art and literature to inspire a closer connection with nature, especially the sea. We make connections that others don't see. We translate science for non-scientists. We help people understand their link with the ocean and the natural world. People often tell us that our work inspired their lifelong personal involvement in conservation. That makes our day!

This year we worked hard to make Blue Ocean's work more relevant to more people—and more prominent in the national discussion. To make our work more widely useful and deeply valued by people hungry for new ideas in conservation, we began reshaping Blue Ocean Institute into a unique hybrid: writers' workshop, academic lab and thought-leading think-tank. Our office move to Stony Brook University's School of Marine and Atmospheric Sciences last summer has helped us keep even more connected to the latest in marine conservation.

Unlike many other conservation groups, we use mainstream channels of distribution—acclaimed books, the PBS television network, *The New York Times*, *Huffington Post* and other established print, television and online media—to widely and deeply share our unique perspectives and publications.

Every action by humans affects the ocean *and* people. Our job is to answer the question, "What should we do?" **This is the foundation of our work.**

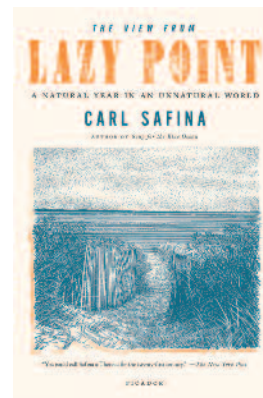
### Blue Ocean Programs: Sea Ethic, From Sea to Table, Science Afield, Next Wave Youth Education, Artistic Collaborations and Blue Ocean Fellows.

## BLUE OCEAN'S SEA ETHIC PROGRAM COMMUNICATES SCIENCE, INSPIRES ACTION

With our **Sea Ethic program** we strive to reach new audiences and engage them in solving ocean problems and influencing solutions. Through books, lectures, media interviews and a new PBS television series, our founding president, author and scientist Dr. Carl Safina, is the principal communicator of the Blue Ocean *Sea Ethic* message and one of today's leading conservation voices. With an unusual ability to tailor his message to audiences as diverse as scientists, mainstream conservationists, faith leaders and students—from Wall Street to Main Street—he eloquently expresses a solution-oriented vision of hope.

**New Book:** In 2012 Safina began research for his seventh book about our moment with nature; this one will explore beyond the oceans. (See more in the *New Directions* section of this report.)

**Other Writing:** Carl Safina continues to author national and international op-eds, feature articles, contributions to scientific journals, book forewords and chapters, essays and blogs published in a wide range of outlets, from *Science* to *The New York Times*. His work gets attention from the *Washington Post* to *Rolling Stone* magazine. Carl's blogs reach new audiences way beyond the ocean conservation "choir." We have seen the impact that a well-timed, news-hooked blog can have. For example, Carl's *Huffington Post* piece, *Bluefin Tuna: New Record Price for Carcass Further Devalues the Fish*, went viral.



The paperback edition of *The View from Lazy Point* hit the shelves in January, 2012

*continued*>

**Tutorials and Primers:** Carl's latest tutorials and primers have been widely shared in 2012 through various partner websites. These authoritative lessons are also tied to the Issues section of Blue Ocean's new website.

- Energy—A Taste Of Waste
- A Brief History of Fishing—With A Splash of Hope (2-part tutorial)
- Science, A Moral Pursuit
- Pacific Voices From A Rising Sea
- Fisheries Management and Maximum Sustainable Yield (3-Part Primer)

(See the *Making Waves* section of this report for more info on *Sea Ethic* program outreach.)

## ***FROM SEA TO TABLE* PROGRAM TRANSLATES SEAFOOD SCIENCE; HELPS CONSUMERS MAKE INFORMED CHOICES**

In 1998, we created the first consumer guide to seafood sustainability. Now, efforts to build awareness and create market-based solutions abound and we are proud to have inspired a movement!

During 2012, we helped consumers, retailers, chefs and health professionals discover the connection between human health, a healthy ocean, fishing and sustainable seafood. Our peer-reviewed species reports are transparent, authoritative, easy to understand and use. You can see them on our website.

*From Sea to Table* consists of interconnected components:

- Web-based rankings of 160+ wild-caught fish and shellfish.
- Green, yellow and red ratings, and advisories for contaminants, including mercury and PCBs.
- Cooking alternatives for unsustainable seafood.
- Green Chefs/Blue Ocean: an interactive, online sustainable seafood course for chefs and culinary professionals.
- Web-based tutorials, videos, links and discussions of issues such as bycatch, mercury in seafood and overfishing.
- Information on seafood nutrition and related health issues.
- Information for retailers who want to switch to selling more sustainable seafood.

### **Incorporating environmental sustainability with health-based seafood recommendations.**

Through our research, we learned that information regarding the environmental impacts of seafood choices was not being addressed sufficiently in either health care or culinary education. During interviews with practicing dietitians, we found them eager to incorporate environmental sustainability into information they provide to clients. Blue Ocean's presentation to the Academy of Nutrition and Dietetics' 2012 Annual Conference, "The Fish on Your Plate, Finding Seafood that Promotes Personal Health and the Health of the Ocean," taught attendees how to incorporate environmental sustainability with their health-based seafood recommendations. Our outreach to Academy chapters about the link between ocean health and human health has been well received and continues on.

## BLUE OCEAN INSTITUTE LAUNCHES NEW FELLOWS PROGRAM

*Fellows to Inspire and Advance a Broader Conservation Dialogue*

We've created a "Blue Ocean Fellows" program to bring new people with established reputations and recognized voices into the Blue Ocean ark. Our Fellows are a few accomplished and innovative artists, authors, chefs and scientists. They will develop and articulate ideas that advance a much larger, and deeper, conservation discussion.

Working independently but inter-dependently as well, Blue Ocean Fellows will create articles, opinion pieces, videos, tutorials and other materials, greatly expanding our reach and influence.

"Blue Ocean Fellows will boost our ability to be a thought-leading group, small in size and big in influence," says Carl Safina, Institute founder.

We're very excited to welcome our first two Blue Ocean Fellows: author and essayist Paul Greenberg and shark expert Dr. Demian Chapman.

### Paul Greenberg

**Paul Greenberg** is the author of the James Beard Award-winning *New York Times* bestseller *Four Fish: The Future of the Last Wild Food* and other books, and a regular contributor to the *New York Times Magazine*, *New York Times Sunday Book Review* and the *New York Times* Opinion page. He has also written for *National Geographic*, *GQ*, *The Times of London*, *Vogue* and many other publications. In the last five years, he has been both a National Endowment for the Arts Literature Fellow and a W. K. Kellogg Foundation Food and Society Policy Fellow.

A guest and commentator on national public radio programs including "Fresh Air" and "All Things Considered," Mr. Greenberg is also a fiction writer. His 2002 novel, *Leaving Katya*, was a Barnes & Noble "Discover Great New Writers" selection.

Greenberg lectures widely on issues of ocean sustainability at diverse venues including the United States Supreme Court, Monterey Bay Aquarium and Culinary Institute of America. He has lectured and reported extensively overseas, with assignments in Russia, Ukraine, France, the Caucasus, Bosnia-Herzegovina, Serbia, the West Bank/Gaza, and many other global locations. His book, *Four Fish*, has been translated into Spanish, Italian, German and Korean, and is soon to be published in Greek, Russian and Mandarin.

### Dr. Demian Chapman

Shark geneticist, **Demian Chapman** is helping small, island nations strengthen their ability to identify illegal shark fishing and enforce recently established shark sanctuaries. As a Fellow, Chapman will co-author influential articles, videos and blogs with Safina to establish better support for shark conservation worldwide.

Chapman's research expertise lies in molecular biology and telemetry tracking, which he integrates to address research questions about how sharks and rays reproduce and disperse. He is investigating how shark reproduction and movements impact population dynamics, genetic diversity and geographic structure and the implications for conservation.

Dr. Chapman is the author of numerous peer-reviewed scientific research articles, and currently manages field research projects on sharks in Belize, the Bahamas, New Zealand and Florida. Chapman's DNA lab is located near the Blue Ocean Institute office on Long Island, NY, in the School of Marine and Atmospheric Sciences at Stony Brook University.



Author and Blue Ocean Fellow, Paul Greenberg. Photo © Laura Straus



Dr. Demian Chapman taking a DNA sample from a nearly 15-foot blunt nose six-gill shark in the Bahamas. Photo © Sean Williams, Cape Eleuthera Institute

## GREEN CHEFS/BLUE OCEAN EDUCATES CHEFS AND CULINARY STUDENTS

*The Culinary World is Hungry for Education about Sustainable Seafood for Ocean and Human Health*



Blue Ocean already has an effective tool for educating professional chefs and chefs-in-training—Green Chefs/Blue Ocean. This free, interactive, online curriculum about seafood sustainability explores fisheries and aquaculture, global supply and demand, and the challenges of purchasing and sourcing ocean-friendly seafood. “Graduates” surveyed last year all said they would use the course again, calling it “the most valuable educational tool related to seafood sustainability we are aware of.”

During 2012 we upgraded the Green Chefs/Blue Ocean content adding up-to-date information about mercury in seafood. And we increased course usership through direct outreach to many American Culinary Federation-accredited schools. Several were interested in using the GC/BO course with their students. One in particular, the Art Institute, which serves 35 campuses around the country and has approximately 15,000 students every year, plans to incorporate GC/BO into their online resource offerings for students.

Communicating with culinary schools, instructors, chefs, professional societies and NGO partners builds awareness of the course and the sustainability issue. Another way to reach the culinary audience is, of course, through the publications they read. This fall, *Chef Educator Today* featured a cover story with Carl Safina: “Mastering Sustainable Seafood.” More culinary coverage is in the works.

## OUR SCIENCE AFIELD PROGRAM PROMOTES COLLABORATION

*Building Knowledge and Effective Partnerships*

**On some of today’s most pressing issues**, we reached a range of audiences with information about ocean acidification, mercury, shark conservation, and radiation detected in fish migrating from Fukushima, Japan.

Blue Ocean research scientist Dr. Alan Duckworth collaborated with fellow scientists on the first experiment examining the effects of warmer, more acidic water on the sponges that bore into the shells of scallops and oysters, weakening and eventually killing them. Duckworth hypothesized that because ocean acidification (caused by climate change) will result in weaker shells in shellfish, boring sponges could cause greater losses of shellfish. Unfortunately, he was right.

The study was done in collaboration with Dr. Bradley Peterson from Stony Brook University. It was funded by a grant from the Disney Worldwide Conservation Fund and was conducted, in part, at the Discovery Bay Marine Lab in Jamaica. The resulting scientific paper, “Effects of seawater temperature and pH on the boring rates of the sponge *Cliona celata* in scallop shells” by Duckworth and Peterson was published in the September 2012 issue of *Marine Biology*.

Our associate, Dr. Eric Gilman, who is based at the Hawaii Pacific University is studying the problem of derelict and abandoned fishing gear that kills many fish and marine mammals. Gilman’s work seeks to fill the gaps in understanding so that fisheries are better managed to minimize wasteful kills.



Measuring overgrowth of algae on a degraded coral reef in the Caribbean. Photo © Carl Safina



## NEXT WAVE YOUTH EDUCATION PROGRAM

*On Campus and in the Estuary*

The Institute's Next Wave Youth Education program unites a diverse body of young people who are inspired to learn more about the ocean, with a mission to cultivate a new generation of conservation leaders and science communicators.

At Stony Brook University's Center for Communicating Science (CCS), Carl Safina teaches Master's and PhD students how to talk about science in plain language to broad audiences. Skills learned at CCS help young scientists communicate more effectively with students, employers, funders, public officials, the press and colleagues in other disciplines. According to Safina, "Unless you can speak effectively about your work, to most people it's as if you haven't done the work."

Actor Alan Alda was instrumental in establishing the Center, and he often keynotes on workshops where Carl is helping teach better communication to scientists and grad students.

### Next Wave Teaches Estuarine Ecology and Human Impact

*Program Illuminates Life in the Peconic Estuary*

Working with the Long Island Aquarium, we introduce marine conservation to thousands of students and educators, as well as the general public. Each year, from April through October, more than 15,000 people climb aboard the Aquarium's Atlantis Explorer tour boat to explore the ecological wonders of the Peconic Estuary.

It's an exciting time of real discovery when everyone exchanges desks and artificial lighting for the sights and smells of life in the estuary. This floating classroom helps students explore and observe the complex web of estuary life through hands-on investigation using scientific equipment, fish seining and stops for guided walks.

Our groups study the estuarine environment in the Peconic River and Flanders Bay, connecting water quality issues to human activities. They learn about plankton, mollusks, crustaceans, the

*continued*



Students and educators study the Peconic Estuary and Flanders Bay aboard the Explorer. They practice close-up observation in the water and on the shore. Photo © Ann Haskell, marine educator

ancient Horseshoe Crab, fish communities, food webs and geology, and how Long Island shores and waters connect to migrations of ocean fish, sea turtles, birds and mammals.

“We feel there is no substitute for hands-on experience,” said John Reilly, science teacher at East Islip, NY High School. “We provide rigor in the classroom but Blue Ocean’s program provides relevance, bringing the text and lectures to life and opening the kids’ eyes to possible career paths and college majors.”

Next Wave educators adapt our program to the needs of each group and provide educational activities and support for teachers, in advance of and following the field trips. All of the Next Wave materials are created to meet National Learning Standards and Ocean Literacy concepts. Next Wave’s hands-on learning has proven successful in developing critical thinking and language skills, inspiring artistic expression and environmental awareness.

To date, Blue Ocean’s Next Wave in the Peconic Estuary has reached more than 120,000 people, immersing them in a productive and powerful life experience.

## Next Wave Interns Learn to Communicate Science and Inspire Others

Each year, interns from Long Island schools and colleges across the nation join the Blue Ocean team to assist Next Wave educators and boat crew. Next Wave interns—scientists-in-training—gain valuable experience working in the estuarine environment, and their interaction with the public and students teaches vital communication skills.

In 2012, Next Wave college and high school interns documented their teamwork as citizen scientists on Next Wave’s blog to report first-hand observations and showcase photographs of the Peconic Estuary. Visit Blue Ocean’s new website to read the Next Wave blog: [www.blueocean.org](http://www.blueocean.org).

## What Our Interns and Educators say about Next Wave

“My work on the Explorer tour boat brought me from a girl who was terrified of talking to people to someone who feels comfortable speaking in front of groups, and passionate about teaching about our natural environment!”

—*Kerri Dobbs, former high school intern and current marine educator.*

“Not only did I learn about Long Island and our surrounding waters, but I learned about people, too. I always knew I wanted to work with animals and this program helped me understand how research and environmental programs work.”

—*Ori Vishnia, Avalon Park and Preserve STATE High School Intern*

“As an Urban Ecology major, I had the best experience educating the public on how and why the marine environment is one of the most productive in the world! The internship helped me know I was on the right path with my degree choice.”

—*Angelika Feiseler, Hofstra University Intern*

## SOCIAL OCEAN AMPS UP OUR ONLINE PRESENCE

*New website, content and connectivity - [www.blueocean.org](http://www.blueocean.org)*

Our new website—[www.blueocean.org](http://www.blueocean.org)—offers fresh images, improved navigation and the latest information about compelling issues facing the ocean and its inhabitants, including global warming, rising seas, ocean acidification, coral reefs in peril and overfishing/recovering fish populations.

The site's improved search engine optimization will make it easier for you to find us, and enhanced integration of social media will make it easy for everyone to link, like, share and follow.

Our new design provides an interconnected tapestry we call *Social Ocean*. For example, short videos on our YouTube channels are linked with tutorials, blogs and articles on our new website. The Issues section of [blueocean.org](http://blueocean.org), in particular, serves as a portal of information and research to guide readers to deeper exploration of today's conservation issues. Our interconnected content weaves between [blueocean.org](http://blueocean.org), [carlsafina.org](http://carlsafina.org) and Facebook pages and Twitter posts for both.

Virtual tours of Safina's books on The Ocean on Google Earth are being added to create an innovative layer to our *Social Ocean*. And as new episodes of *Saving the Ocean with Carl Safina* are broadcast on PBS, we can connect related *Social Ocean* content to the TV show's website and Facebook page. We think *Social Ocean* marries Safina's unique perspective and leadership with the power of online networking and social media. It is providing an amazing tool we can use to inform, inspire and connect.

We hope you'll find rich rewards on our new site. Please bookmark it and visit it often. If you miss a press release, media clip or feature story, no worry: our archives will provide access, at any time, from anywhere in the world.

## BLUE OCEAN AND THE ARTS

*Collaborations Inspire New Audiences*

Blue Ocean is often approached by filmmakers, dancers, painters, sculptors, photographers and musicians. We pick one or two strategic collaborations each year to inspire interest in the ocean and to build new audiences for our work.

During 2012, we helped marine biologist and artist Christopher Wojcik with his *Art as Reef* project--a 40-foot long, anatomically correct representation of a horseshoe crab designed to serve as an artificial reef off the coast of New Jersey.

The exhibition of photographs and installations, *Collapse: The Cry of Silent Forms*, included quotes from Carl Safina's book, *A Sea in Flames*. Created by artist and biologist, Brandon Bal-lengée, the exhibition at Ronald Feldman Gallery, in New York City, explored the impact of the damaged environment on marine life after the BP Deepwater Horizon oil blowout in 2010.

### 4 WAYS TO GIVE TO BLUE OCEAN INSTITUTE

*"Direct compassion and heart-filled work toward the living creatures of this planet."*

*—Dr. Eric Gilchrist*

IN 2011, Blue Ocean Institute established an endowment fund to honor the memory of our dear friend and board member, Dr. Eric Gilchrist. His steady support for Blue Ocean has continued beyond his passing through a bequest that now serves as the seed for our endowment.

His generosity continues to inspire us.

There are four easy ways to contribute to Blue Ocean Institute.

#### 1. Online.

Visit <http://blueocean.org/donate/>

#### 2. Telephone.

631-632-3763

#### 3. Mail.

Please send your tax-deductible donation to:

Blue Ocean Institute, Dutchess Hall,  
Suite 137, School of Marine and  
Atmospheric Sciences,  
Stony Brook University,  
Stony Brook, NY 11794-5000.

Please make your check payable to  
Blue Ocean Institute.

#### 4. To contribute to the Blue Ocean Endowment Fund.

Please contact Jesse Bruschini,  
Vice President: 631-632-3763  
or [jbruschini@blueocean.org](mailto:jbruschini@blueocean.org).

Blue Ocean Institute is a 501(c) 3 nonprofit organization based on Long Island, NY.

# LIFE FINDS A WAY—BUT NEEDS OUR HELP

By Carl Safina

Originally posted on *Huffington Post* on July 17, 2012

I CAN'T REMEMBER WHO DRAGGED ME to see the movie *Jurassic Park*, but one resonant line in that movie was worth the price of admission, this unforgettable sentence: “Life finds a way.” It popped out at me because it so economically summed up a truth behind all of nature’s stunning diversity and the continuity of the living adventure of Life on Earth.

Australian ecologist Roger Bradbury has recently asserted that coral reefs are doomed, living-dead, “zombie ecosystems” that will inevitably—and soon—utterly collapse under the multiple fatal blows of overfishing, pollution and the ocean acidification and warming resulting from the global buildup of carbon dioxide. (See his *New York Times* op-ed, “A World Without Coral Reefs.”)

Bradbury says we should give up. Any hope for reefs, he says, is a delusion.

Can that really be so? Certainly things die, lineages go extinct—and coral reefs are in a world of hurt. All true. Also true is the existence of heat-tolerant corals, corals that are regularly exposed to (and routinely survive) the extreme stress of finding themselves out in the tropical air at low tide, and many ocean organisms that live through large swings in pH through tidal cycles.

Yes, many coral reefs are degraded. Yes, it doesn’t look good. But sometimes living diversity supplies marginal adaptations that suddenly fit perfectly into new conditions. Someone (not Darwin) called it “survival of the fittest.” That’s what the phrase means; not survival of the strongest but of the ones who find themselves in the right place at the right time as conditions change to suddenly suit them. Look around; it works.

Agreed, it is past due to raise the alarm that coral reefs in many areas have largely collapsed, and that their future looks bleak. As an anguished lover of reefs and living things generally, and as an ecologist by profession, I cannot picture what it will take for coral reef systems to survive and thrive. But I also cannot picture a world in which no reef corals adapt, persist, and flourish, simply because it’s true: Life finds a way.

Bradbury suggests giving up and spending money on what could replace the values (for example, fish) that coral reefs have provided to humans. But what would giving up look like? Overfishing is old news, and plenty of people are, in fact, spending money trying to raise fish. Some are making money. Overpopulation: also old news and crucial to everything from water supplies to prospects for peace. One doesn’t need to certify future coral reef destruction to realize that overpopulation is bad for human health and dignity, not to mention a catastrophe for wild living systems. These problems have caused the losses to date and they continue. Ocean warming and acidification are also building.

But to accept that reefs are doomed implies that the best response is to give up hope, thus give up effort. That means we give up on curbing overfishing and allowing rebuilding (yet these two goals are, in fact, increasingly working in many places, specifically because people have not given up, and because letting fish recover can work). It means we give up on controlling pollution (in the U.S., the Clean Water Act brought great improvement to rivers so polluted that they actually caught fire multiple times; developing nations deserve to do no less for themselves). It means we give up on population, whose most effective solving strategy is to teach girls to read and write.

Giving up, while reefs still flourish in many places, means accepting what is unacceptable, and abandoning work on situations that can likely be improved. It means deciding to be hopeless. It means giving up on the reefs, the fishes, and the people, who need all the combined efforts of those who both know the science best—and who, while life exists, won’t give up.

The science is clear that reefs are in many places degraded and in serious trouble. But no science has, or likely can, determine that reefs and all their associated non-coral creatures are unequivocally, equally and everywhere, completely doomed to total non-existence. In fact, much science suggests they will persist in some lesser form. Bleak prospects have been part of many dramatic turnarounds, and, who knows, life may, as usual—with our best efforts—find a way.

FEATURE

# SAVING THE OCEAN WITH CARL SAFINA — Stories of Hope and Innovation

Season One of PBS Series Premiered in October, 2012



Mama Grey Whale in San Ignacio lagoon, Baja Mexico.  
Photo Photo © Eddie Kisfaludy

*Saving the Ocean continued*



In signature Blue Ocean Institute style, *Saving the Ocean with Carl Safina* provides a refreshing change from the usual doom-and-gloom environmental news by focusing on people and communities around the world who have solutions. Produced with the Chedd-Angier company, the 10-episode first season focuses on inspirational stories of dedicated individuals with innovative solutions in seemingly impossible situations. These include a marine reserve in Belize where threatened sharks are now thriving; Matura Beach in Trinidad where ancient, thousand-pound leatherback turtles have made a spectacular comeback; and a community in Zanzibar where local Imams are preaching Koran-inspired protection of coral reefs.

“Throughout my 30-year career, I’ve

crisscrossed the globe and seen destruction of our vital ecosystems firsthand,” explains marine biologist Carl Safina. “The problems we see in headlines—overfishing, pollution and dying coral reefs—are real. *Saving the Ocean* profiles the people who are solving problems. With this new PBS series, we’re letting people see how some of these problems can be fixed.”

We are deeply grateful to the Kendeda Fund and the Okeanos Foundation for the Sea, which made possible six new episodes for Season One in 2012. Fundraising efforts for Season Two of *Saving the Ocean* have paralleled preparations to launch the first year series. To support another year of *Saving the Ocean*, contact Blue Ocean Institute: [jbruschini@blueocean.org](mailto:jbruschini@blueocean.org).

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## DON'T MISS A SINGLE EPISODE OF *SAVING THE OCEAN* WITH CARL SAFINA. Now on PBS!

### 1 - Destination Baja

The story of how local fishing people in Baja California, Mexico stopped fearing “devil-fish” – actually gray whales – and instead developed a whale-watching coop that now caters to tourists from all over the world. They’re also getting rich by setting fishing rules for themselves that are stricter than the government regulations. Shrewd fishermen!

### 2 & 3 - Swordfish!

In a two-part special, Carl Safina goes to sea with some of the last swordfish harpooners, to experience first hand one of the world’s cleanest and most sus-

tainable fisheries, and to find out why swordfish are the world’s best big-fish comeback story.

### 4 - Shark Reef

Sharks are in trouble almost everywhere because of relentless pressure of the shark fin trade. Glover’s Reef Marine Reserve in Belize shows how sharks can thrive, even when local people continue to depend on fishing.

### 5 & 6 - River of Kings

This two-part episode examines the huge restoration project for Washington State’s Nisqually River, from its source on Mount Rainier to the estuary in Puget Sound. Led by the Nisqually Indian tribe, the restora-

tion aims to fill the river once again with abundant, magnificent wild salmon.

### 7 - Trinidad’s Turtle Giants

After local leaders launched a crusade to end the slaughter of Trinidad’s thousand-pound leatherback turtles, the turtles were transformed from shark bait to tourist attraction. Now, Trinidad’s beaches support 80% of the entire Caribbean’s leatherbacks while nearby villages make a great living catering to the visitors.



## About the Production Company

Chedd-Angier is one of the country's most experienced and innovative media production companies. Founded by members of the team that created public television's Nova series, Chedd-Angier has produced more than 200 hours of programming for PBS and the BBC. The company created PBS' first prime-time science magazine series, *Discover: The World of Science*, hosted by Peter Graves; and its successor, *Scientific American Frontiers*, hosted by Alan Alda.

It has produced many episodes for PBS series: *Nova*; *Frontline*; *War and Peace in the Nuclear Age*; *Columbus and the Age of Discovery*; *Enterprise*. Chedd-Angier has created several short series: *The Secret of Life*, hosted by David Suzuki; *Race to Save the Planet*, hosted by Meryl Streep; *The Human Spark*, hosted by Alan Alda.

Chedd-Angier's work has won many awards, including three national Emmys, the AAAS/Kavli prize, two Prix Italia Special Citations and the Council of Scientific Presidents' Sagan Award.



Above: left to right; Trap fishermen in their dhow, Pemba Island, Tanzania. Photo © Carl Safina; A baby Gray Whale comes to say hello to Carl Safina in San Ignacio Lagoon, Baja, Mexico. Photo © Eddie Kisfaludy; Javier Villavicencio soothes a friendly eastern Pacific Green Turtle that he will tag for identification and then release. Photo © Carl Safina; In Frenchman Bay, Maine, Carl Safina discusses the state of cod with fisheries biologists Brian Tarbox. Photo © John Angier

### 8 - Cod Comeback?

In the rich fishing grounds of New England and Canada, it seemed like the cod would never run out – until they did. Fishing communities from Newfoundland to Massachusetts fell apart. Widespread closures in the 1990s aimed to let the cod return, but it's been a long wait. Carl Safina goes fishing to find some of the first signs that the famous codfish just might, indeed, be coming back.

### 9 - The Sacred Island

In an exotic Zanzibar island it was a classic clash: resort development versus villages dependent on local reefs for their livelihood. Only this time, the villagers won. Now, these Muslim fishermen manage the reefs

for themselves, and all over the island their Imams preach how the Koran calls humans to be the stewards of Creation.

### 10 - Scourge of the Lionfish

Starting from a few aquarium escapes, in just 30 years the beautiful but voracious (and venomous) Pacific lionfish has become the world's worst marine alien invasion. They're now all over the Caribbean and along the Atlantic coasts of North and South America. Diving in the Bahamas to help clear them out and sitting down to a lionfish dinner in the Yucatan, Carl Safina learns how people are fighting to take their reefs back.

## How to View

- Check your local PBS station listings for dates and times.
- Watch full episodes online at PBS, free, and purchase DVDs: <http://video.pbs.org/program/saving-the-ocean/>
- Visit the series website: [www.chedd-angier.com/savingtheocean](http://www.chedd-angier.com/savingtheocean)

# BLUE OCEAN REPORT:

## Mercury: Sources in the Environment, Health Effects and Politics

We Show You that You Don't Have to Avoid Seafood to Avoid Mercury

At Blue Ocean we work diligently to inspire, educate and create advocacy around key conservation issues.

Mercury in seafood, an issue that causes much confusion, is the focus of Blue Ocean's comprehensive report, completed in 2012. In the Fall of 2010, the Institute began a partnership with the Gelfond Fund for Mercury Research and Outreach at Stony Brook University. Through that collaboration, we created *Mercury: Sources in the Environment, Health Effects and Politics*, released in the summer of 2012. Written by Sharon Guynup and with an intro and summary by Carl Safina, it summarizes much of what scientists and medical researchers have learned about mercury in the environment, in food and in people.

**If a fish cannot fit on a platter whole, it's probably high in mercury.**

The report offers information that is easy to use in daily lives. For example, if you want to know which fish are low in mercury, the report provides helpful graphics, lists and easy "rules of thumb." Think of it this way: fish is good for you; mercury is bad for you. Fish carry mercury; some fish have a lot and some have very little. So choose fish low in mercury. We tell you how.

We hope the report sheds light on a topic that can seem confusing. We hope you find it enlightening and clarifying. We hope it helps to keep you healthy.

### The Mercury Primer

Mercury is tricky. It's the only metal that is liquid at room temperature. It's an element. It exists in several forms and various compounds. All are toxic. Some forms are lethal in very small quantities.

After World War II, industry boomed across the globe. Consequently, so did mercury emissions to the atmosphere. While volcanoes and wildfires release some mercury into the air, manmade sources contribute the majority—two-thirds—of mercury to the atmosphere. Coal-burning power plants are the single largest source of mercury emissions. Other industrial sources include municipal waste combustors, medical waste incinerators and plants that produce chlorine.

High and chronic exposures have been responsible for some horrible cases of mass poisonings. In the 18th and 19th centuries, factory workers making felt hats using mercury-soaked fabric slowly developed twitches, tremors and dementia, hence the term: "mad as a hatter." For nearly 40 years in the mid-20th century, a factory dumped mercury compounds into Minamata Bay, Japan. By the mid-1950s, thousands of residents of nearby fishing communities were stricken with neurological problems and with trouble seeing, speaking, and walking. Worse, many babies were born paralyzed, and with gross deformities and mental retardation. Well over 10,000 people were poisoned.



## But What Fish Can I Eat?

Mercury levels in parts per million

Despair not, fish lovers! There are plenty of varieties of seafood that are safe to eat, and many others can be enjoyed from time to time. For more precise guidance—especially for women who are or may soon be pregnant—consult an online mercury calculator such as the one at [gotmercury.org](http://gotmercury.org). You might also want to check the fish advisory for your particular state at [epa.gov/ost/fish](http://epa.gov/ost/fish).

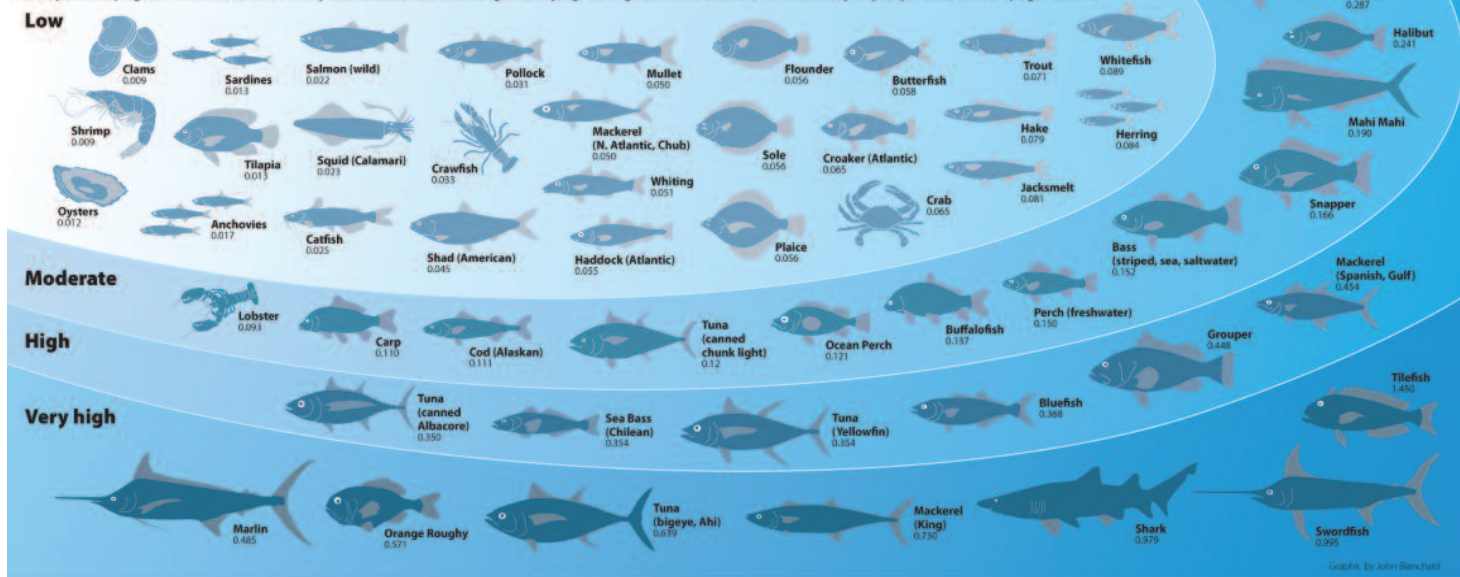


Illustration by John Blanchard

## How Mercury is Released into the Air and into the Food Chain

Mercury is released into the air from natural sources such as volcanoes, and human sources such as burning coal. When in the air, mercury can travel thousands of miles. In the U.S., mercury released in the Midwest falls to the ground on the East Coast. But the problem is not only national; it's global. Thirty percent of the mercury deposited in the U.S. is from Asia. Significant levels of mercury are even found in seemingly pristine areas, including the Arctic.

After falling to land, mercury travels to lakes and oceans where bacteria convert it to a more toxic form: methylmercury. Small organisms called phytoplankton absorb the methylmercury in a process called bioaccumulation.

Small animals called zooplankton eat the phytoplankton that contains mercury. Little fish eat the zooplankton, big fish eat the little fish, and methylmercury makes its way up the food chain.

The longer the food chain, the more toxic the top predators. Animals in each link in the food chain can have between two and seven times the mercury of their prey in the

previous link. When humans become the last link in the ocean food chain by consuming top predators such as sharks, swordfish, or tunas, they get a high mercury dose. Arctic peoples such as North American Inuit and the Faroe Islanders, who still eat a lot of seals, dolphins, and whale-meat, carry some of the highest mercury loads. But so do some people who eat a small piece of a big fish many times a week.

**Because seafood is both nutritious and our main source of mercury, the answer isn't, "avoid seafood" but rather, "avoid mercury."**

Humans are not the only animals affected by methylmercury from seafood. Like people who eat too much mercury-contaminated fish, fish-eating wildlife, birds such as ibises, herons and egrets, and aquatic mammals including whales and dolphins, can suffer neurological and developmental effects.

Mercury has recently been implicated in egret declines in south Florida, with the birds suffering liver and kidney damage. Even insect-eating songbirds such as thrushes and tree swallows are experiencing mercury-induced reproductive problems and lower survival. Otters in Maine and Vermont and mink in Massachusetts and Connecticut carry mercury concentrations at potentially fatal levels.

**Eat Small to Avoid Mercury**

How much does it take to cause health problems? Experts disagree. Even so, there's an easy, sensible path through this maze. Fish-eating fishes like bass, snappers or groupers have higher mercury concentrations than do low-on-the-food-chain shell bearing mollusks (clams, oysters, scallops), crustaceans (shrimp, lobsters, crabs) or mainly vegetarian fishes like tilapia. A grilled shark steak has a relatively high concentration of mercury; a baked clam has very little. (It doesn't matter how you cook it or whether it's raw; the mercury stays.)

would take a mighty large platter to fit a whole tuna, since yellowfin, bigeye and bluefin tuna often exceed 100 pounds (bluefin can reach well over 1,000). Beware of fish sold as steaks; those are big fish, so limit your eating. Canned tuna is usually yellowfin, skipjack or albacore tuna. Most Americans eat so much canned tuna, in fact, that over one-third of the U.S. population's mercury comes from canned tuna.

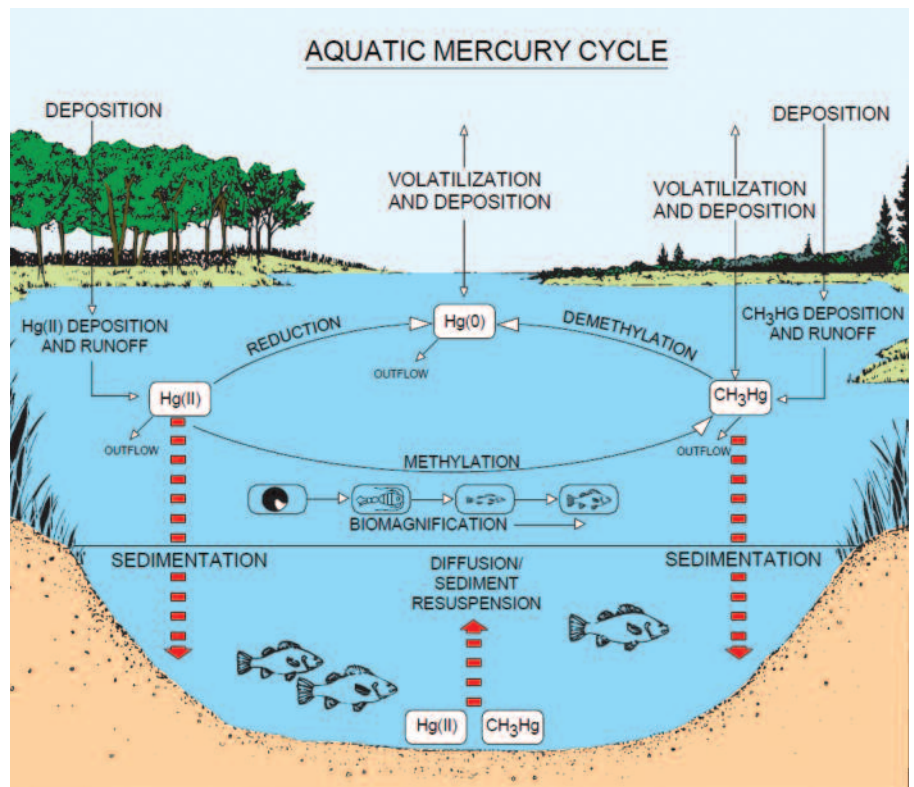
So the first rule of thumb is this: the more predatory the fish, the higher on the food chain, the more mercury they contain. The solution: eat small.

How dangerous is any given meal to your health? That depends on how big a piece you eat relative to your body weight, whether you're still growing, and whether you're pregnant or likely to become pregnant—and whether you want to eat swordfish, shark, tuna or other big fish once a year or several times a week.

If exposure stops, blood mercury levels

**Think of it this way: fish is good for you; mercury is bad for you. Fish carry mercury; some fish have a lot and some have very little. So choose fish low in mercury. We tell you how.**

If a fish cannot fit on a platter whole, it's probably high in mercury. For instance, some of the lowest-mercury seafoods include shrimp, salmon, catfish and pollock. You could fit them on a platter whole. But it



The Mercury Cycle. Source: USGS; Geologic Studies of Mercury by the U.S. Geological Survey.

## The more predatory the fish, the higher on the food chain, the more mercury they contain. The solution: eat small.

drop to half within two months of exposure as mercury passes out of the body. If we habitually eat foods with mercury, mercury accumulates, and with age our mercury level increases.

Should we eat fish because it's healthy? Should we avoid seafood because it's dangerous? Do the benefits of eating fish outweigh the risks? These are the wrong questions. Because seafood is both nutritious and our main source of mercury, the answer isn't, "avoid seafood" but rather, "avoid mercury."

### The Way Forward

Existing pollution control technology could lower global mercury discharges by up to 60 percent. The European Mercury Strategy, launched in 2005, includes a 2011 ban on mercury exports, a phase-out of mercury in goods and industrial applications, new rules for safe storage, and reductions in mercury emissions from fossil-fuel power plants and industrial facilities.

In the U.S., there's been a sharp drop in mercury use in batteries, fungicides and paints. Mercury emissions from U.S. municipal and medical waste incinerators have gone down by 90 percent. But what about coal? New regulations enacted by the Obama Administration in December 2011 will, for the first time, regulate emissions from coal-fired power plants under the Clean Air Act. These new rules will remove over 90 percent of the mercury when power plants burn coal. More than half of all coal-fired power plants already use the proposed technologies.

Compliance will cost about \$11 billion yearly, but the EPA estimates benefits of up to \$140 billion each year. In other words, every dollar spent reducing power plant pollution can yield up to \$13 in health and economic benefits.

That's the way forward, and cause for optimism.

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## WHAT CAN YOU DO NOW?

- **Educate yourself. Read the Blue Ocean Report: *Mercury: Sources in the Environment, Health Effects and Politics.*** (<http://blueocean.org/documents/2012/07/boi-mercury-report.pdf>)
- **Reduce or eliminate consumption of large predator fish.**
- **Use seafood guides from Blue Ocean Institute and Monterey Bay Aquarium to help select seafood wisely for conservation and your health.** (<http://blueocean.org/seafoods/>)
- **Reduce personal energy consumption.**
- **Invest in clean energy sources, such as wind and solar.**
- **Demand strict emissions standards for coal-burning power plants.**

### FOR ADDITIONAL READING:

**Visit our Mercury in Seafood page** for the full report, additional reading, video tutorials, media coverage, partner links, seafood rankings and other valuable mercury information:

<http://blueocean.org/issues/fish-as-food/mercury/>

Check out our partner's site: **The Gelfond Fund for Mercury Research & Outreach - [www.stonybrook.edu/mercury](http://www.stonybrook.edu/mercury)**

# Blue Ocean Institute and Whole Foods Market Partnership Promotes Sustainable Seafood from Boat to Counter Top

## Seafood Retailer is Standard-bearer for Seafood Sourcing and Retail Sales

In 2010, Blue Ocean Institute began a partnership with Whole Foods Market (WFM), a leading seafood retailer with stores throughout Canada, the United Kingdom and the United States. The partnership works like this: Whole Foods Market uses the more than 160 seafood rankings prepared by Blue Ocean Institute, with others prepared by Monterey Bay Aquarium, to source responsibly caught seafood and to educate consumers at the Market's seafood counters.

Blue Ocean's ranking system is a rigorous three-part process. Each ranking takes months of research to condense dozens of scientific and government reports. Each ranking is based on 60 questions that investigate all aspects of the fishing process, from species abundance and fishery management to pollution run-off. Additionally, each report is peer-reviewed to ensure each ranking is accurate and up-to-date.

The team of fishery scientists who complete the research was led in 2012 by Elizabeth Brown and Dr. Alan Duckworth. Alan describes the process this way: "Ranking a seafood species is often a maddening process of finding a snippet of information buried in a 100-page government report, but Blue Ocean's results help us all make better decisions that protect fish populations and promote healthier oceans."

Whole Foods Market translates the rankings into a ratings system that helps customers make responsible selections. WFM seafood receives close scrutiny from the boat all the way to the seafood case. It builds partnerships with farmers and fishermen who are committed to health, the environment and the integrity of our oceans, and sources seafood domestically and locally whenever possible. Whole Foods Market also eschews standard industry practices, including using artificial preservatives to boost water weight and extend shelf life, or carbon monoxide to enhance color.

Its partnerships with fishermen and farmers are reaping big rewards. "Whole Foods staff has worked closely with their seafood producers to move some of them closer to sustainable methods," says Carl Safina. "Those who've improved enough to make the cut get to stay in the fold. That's progress. If you want to make change, 'Show me how' can be a stronger, more effective approach than 'Just say no.' Kudos to Whole Foods Market for showing how it's done."

In the following interview with Blue Ocean Institute, Whole Foods' Carrie Brownstein, Seafood Quality Standards Coordinator, and David Pilat, Global Seafood Coordinator, discuss seafood sourcing, ratings and the company's conservation impact.

**Blue Ocean Institute: What makes Whole Food's seafood different from other seafood retailers?**

**Carrie Brownstein:** Our Quality Standards differentiate the seafood sold at Whole Foods Market. To start, we sell only high quality seafood and we prohibit use of preservatives that can make seafood look like it's high quality when it's not. In the seafood industry there are some unfortunate practices. For example, some producers will use preservatives like phosphates and sulfites to retain the appearance of freshness or to add weight. This allows them to sell products at a lower price, but it can affect flavor, texture and can cause allergic reactions. We also prohibit treatment of carbon monoxide (CO) on our seafood, which is used in the industry to preserve fish's bright color (for example with tuna), even when the fish is no longer fresh.

No retailer is working as hard as we work on seafood sustainability. After a two-year multi-stakeholder process, we set industry leading standards for aquaculture (farmed seafood), which we released in 2007 (farmed salmon) and 2008 (other species of finfish and shrimp). To verify that the standards are met, all of our farms must pass an annual third-party audit. Seafood from certified farms carries our Responsibly Farmed logo. For wild-caught seafood we collaborate with the Marine Stewardship Council (MSC) to offer a wide range of MSC-certified seafood. And, if

it's not MSC-certified, our wild-caught seafood is labeled by Blue Ocean Institute or Monterey Bay Aquarium to indicate sustainability. Because we no longer sell any seafood from red-rated fisheries, any seafood choice at Whole Foods Market is a responsible one.

**BOI: In 1999, Whole Foods Market became the first U.S. retailer to collaborate with the Marine Stewardship Council (MSC), the world's leading certification body for sustainable wild-caught seafood. What does "MSC certification mean" for shoppers?**

**David Pilat:** The MSC logo is our way of telling customers that the wild-caught seafood they are purchasing is certified sustainable. This means shoppers can select seafood confidently, knowing it came from a fishery that maintains healthy populations and doesn't harm the ecosystem. We source from more than 30 MSC certified fisheries worldwide.

**BOI: What prompted that collaboration?**

**CB:** One of our core values is to take care of our environment. We started learning about what was happening in the oceans with marine fish populations. When the MSC was developed as part of the solution, using a multi-stakeholder approach, we got involved.

Margaret Wittenberg, our VP for Quality Standards and Public Affairs, has served on the MSC's Stakeholder Council since 1999 and was a member of the Board of Trustees from 2002 to 2009.

**BOI: In 2010, you partnered with Blue Ocean Institute and Monterey Bay Aquarium to launch a science-based, wild-caught seafood rating program. Tell us how it works.**

**CB:** Each of our Whole Foods Market regions partners with either Blue Ocean Institute (BOI) or Monterey Bay Aquarium (MBA). BOI and MBA conduct research and generate sustainability rankings for all of the fisheries from which we source our wild-caught seafood. So, the rankings are specific to not only the species we're sourcing, but also the particular fish population, the fishing method used, and the management system under which that fishery is governed. All of the rankings are online on the BOI or MBA websites, so the research and rankings are completely transparent. BOI and MBA's color-coded sustainability rankings are placed directly on the tags in our seafood cases. Customers can easily tell the sustainability status of everything we're selling.

**BOI: What are the requirements to use the Whole Foods Market "Responsibly Farmed" logo?**

**CB:** Our industry leading standards cover every angle of farmed seafood production. Here are a few examples: The standards prohibit the use of antibiotics, added growth hormones, preservatives such as sulfites, poultry and mammalian products in feed, genetically modified or cloned seafood, and toxic chemicals such as malachite green and organophosphate pesticides. They also require that producers minimize the impacts of fish farming on the environment by protecting sensitive habitats such as mangrove forests and wetlands, monitoring water quality to prevent pollution, and sourcing feed ingredients responsibly. In addition, all farms must pass an annual third-party audit to verify that the standards are being met. Finally, farm to store traceability is required from the ponds, pens, raceways, or tanks where the young fish are raised to the plants where they are processed, and the store where they're sold. The full standards are available for download from our website.

**BOI: What are your recent milestones in sustainable seafood sales?**

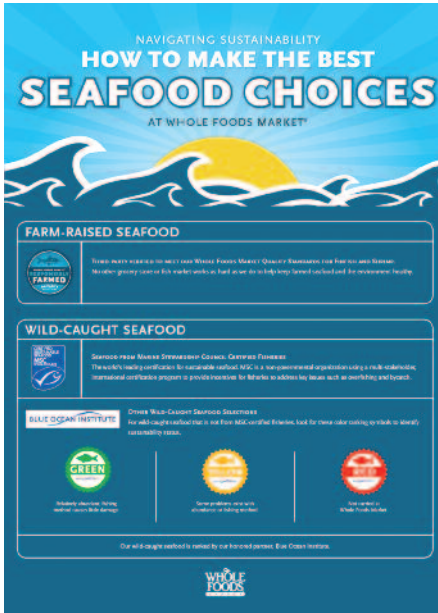
**DP:** Removing vulnerable species like orange roughy and sharks was huge. But the biggest milestone, of course, was our announcement on Earth Day 2012 that our seafood departments would no longer carry seafood from red-rated fisheries. That was a huge accomplishment for our purchasing team and our suppliers – and it couldn't have worked without a lot of collaboration and hard work on both ends. We're so grateful to partner with BOI, MBA, and fisheries and suppliers that are so dedicated to sustainability.

After the announcement, we also spearheaded an initiative to name the company's best fishmonger. We wanted to honor the hard work and expertise that these guys and gals bring to our seafood departments every day. They've got to not only know what to



Seafood at Whole Foods Market receives close scrutiny from the farm or boat, all the way to the seafood case, ensuring transparency at the counter. Image courtesy of Whole Foods Market.

*continued*



Whole Foods Market translates Blue Ocean rankings into easy-to-use signage that helps customers make responsible selections. Image courtesy of Whole Foods Market.

recommend and how to cook it, but also how to fillet the fish, de-vein the shrimp, shuck the oysters – all the behind-the-scenes skills our shoppers have come to appreciate. The prize went to Bob “The Fish Guy” Reany, from Denver. To win the contest, Bob cut and filleted a whole MSC-certified wild Alaskan salmon for the highest yield of all the contestants – in just 90 seconds!

**BOI: You decided to stop selling all red-rated seafood as of Earth Day 2012, a year earlier than planned. How has that decision been received by customers, fishermen and the press?**

**DP:** Our fishmongers report overwhelming support from our customers. Many fishermen have partnered with us to offer more sustainable choices at our seafood counters, too. The combination of the sustainability initiative itself, the buzz among customers, and support from fisheries has definitely helped with the wonderful accolades we’ve received in the press, including *The New York Times*, *Huffington Post*, *USA Today*, *The Wall Street Journal*, and even ABC and CBS national news.

**BOI: What are some examples of the “on-the-water” impact Whole Food Market’s sustainable seafood policies have created?**

**CB:** A recent paper came out by Gutierrez et al. (Aug. 2012) that demonstrates the success of the MSC program. The study compared the status and abundance of 45 certified stocks with 179 uncertified stocks. The paper summarized the MSC-certified seafood is three to five times less likely to be subject to harmful fishing than uncertified seafood. Additional findings were that 74 percent of certified fisheries were above biomass (population size) levels that would produce maximum sustainable yield. In contrast, only 44 percent of uncertified fisheries were above this level. By offering MSC-certified seafood in our stores, we provide a market for fishermen fishing sustainably to sell their products.

**BOI: How have your customers and your suppliers responded to the seafood ratings system?**

**DP:** We are encouraged by the strong support our customers have shown to purchasing-sustainable seafood options. Our sales of MSC-certified and green-rated species

continue to spike, which is great for our suppliers who have worked so hard to source sustainably, too!

**BOI: Why did you choose Blue Ocean Institute as a partner?**

**CB:** We were looking for a highly reputable organization that used science-based, transparent methods for researching and evaluating fisheries. And as a founding member of Blue Ocean Institute, I am pretty familiar with the program!

**BOI: Is there anything you would like to mention as a new initiative, plan or policy related to sustainable seafood or consumer education?**

**DP:** Continuing to promote sustainable wild-caught seafood is at the top of the list! We’re encouraged that more consumers are on board, and also by the number of fisheries that are getting rated via our requests. Specifically, this year we are promoting MSC-certified Pacific cod and harpoon-caught swordfish. We’re also working hard to help our independent sushi vendors take next steps towards sustainable sourcing.



Above left: David Pilat, Global Seafood Coordinator at Whole Foods Market; Right: Carrie Brownstein, Seafood Quality Standards Coordinator at Whole Foods Market.

## Andrew Sabin

### The Andrew Sabin Family Foundation

It's no wonder Carl Safina and Andrew Sabin enjoy fishing together in the Long Island Sound. They both share a focus on investing in the future of the environment, and sharing their passion by introducing others to the natural world.

"I've tromped around in the woods, in the dark, in the cold with Andy to see wondrous creatures like salamanders that migrate through the woods in late-winter to reach a pond that's barely beginning to thaw," says Safina. "It's like being a 12-year old again."

Those tromps are an extension of Andrew Sabin's active engagement with community and environmental programs around the world. For example, with a goal to stimulate environmental entrepreneurship, the Foundation established the Sabin Environmental Venture Prize at Yale University. It offers a \$25,000 annual award to support faculty and student interest in the creation of new nonprofit and commercial organizations, business models or other innovations that address pressing environmental challenges.

He spearheaded the building of a community recreation center in East Hampton, NY, and as an extension of his life-long fascination with reptiles and amphibians, and dedication to environmental education, he founded the South Fork Natural History Museum in Bridgehampton and continues to lead nature walks for the institution. During an expedition to Papua, New Guinea, a new species of frog was discovered and named for him: *Aphantophryne sabinii*.

We offer our profound gratitude for the friendship and support of Andrew Sabin and the Andrew Sabin Family Foundation.



Andrew Sabin regards an endangered Tiger Salamander he has just found breeding in a woodland pond. Photo © Carl Safina

**"Andrew Sabin has a childlike approach to the natural world – filled with wonder – and he takes great pleasure in sharing that world with children and families."**

*—Carl Safina*

# HOW TO CATCH FISH AND SAVE FISHERIES

By Carl Safina and Brett Jenks

Published on October 19, 2012 in the *New York Times*.  
A version of this op-ed also appeared in print on October 20, 2012,  
in the *International Herald Tribune*.

THIS WEEK, TOP ENVIRONMENTAL MINISTERS from 168 countries will descend upon Hyderabad, India. The goal: agree on how to protect 10 percent of the world's ocean. Actually, they'd set that goal two years ago under the Convention on Biological Diversity. You might be thinking, here we go again—easy to agree on goals; hard to agree on how to meet them.

But it matters. The U.S. Commerce Department just declared major fisheries in New England, Alaska and Mississippi a “disaster.” A new study found that Australia's Great Barrier Reef has lost half its coral since 1985. British and French fisherman clashed as boats from the UK sailed into French waters on the hunt for scallops. But that bell tolls not just for the fishermen—it tolls for us. Fish are the primary source of protein for an estimated one billion people around the world.

The journal *Science* recently published the first comprehensive analysis of more than 10,000 fisheries—roughly 80 percent of our global fish catch. The conclusion: fish worldwide are swiftly declining. This global analysis paints a stark new picture of a global ocean fished to exhaustion in an increasingly hungry world.

So, why are we hopeful?

Well, the analysis of global fisheries has a silver lining. We have not reached a point of no return. We have time. Solutions exist.

The good news: many large commercial fisheries are already benefitting from improved management of the last decade. The harder problem is with smaller-scale fisheries that local communities rely on for food and income. The fact is that small-scale fishers—who fish within 10 miles of their coast—account for nearly half of the world's global catch and employ 33 million of the world's 36 million fishers, while also creating jobs for 107 million people in fish processing and selling. Mostly poor, they live mainly in areas lacking fisheries management, monitoring, and enforcement. No one is in a position to formally declare their fisheries “disasters.” They must just endure their situation. Or—take control of it.

A rising tide of local communities is doing just that. Here's the emerging recipe proposed in that same *Science* study: Give local fishers exclusive access to their fishing grounds in the form of territorial use rights (TURF, in the jargon). In exchange for the privilege of exclusivity, local fishers agree to establish and protect no-take zones. Results include: increased fish populations, richer marine habitats, and coastlines less vulnerable to climate change. And: more food for people.

Unleashing the self-interest of local fishers to advance both conservation and economic development can create one of those rare win-win scenarios.



## ESSAY

A growing body of research shows that fish populations inside a no take zone can more than quadruple. Fish numbers outside the reserve can double. And, exclusive access enables investment and better management, increasing the catch's value.

It works. We've visited several local fisheries in Mexico and the Philippines this year—with heads of leading research institutions, NGOs, and government agencies—and in each case, we witnessed increasing fish populations, increased catch value, and better-protected reefs.

TURF Reserves are not a silver bullet. They might, however, be the silver buckshot. With nearly 1 billion people reliant on the ocean for their primary source of protein, stakes are high. If the most fish-dependent nations adopted widespread networks of TURF Reserve, they could potentially create enough fish recovery to sustainably feed hundreds of millions of people.

That's a big if, however. The solution is not to fix a small number of fisheries. We need thousands of TURF Reserves in dozens of countries just to get the ball rolling. Ultimately, we need a commitment of governments, foundations, NGOs, and the private sector to forge a major investment in near shore fisheries in the developing tropics. The coastal communities themselves must unfurl the ocean's silver lining.

Protecting 10 percent of the world's oceans is no small task. TURF Reserves offer one solution to start us down that path. But they are neither complicated nor expensive. The *Science* paper should be required reading for every environmental minister packing their bags to go to Hyderabad this week.

Clearly this problem – and the opportunity – is bigger than all of us. And there are a billion reasons for us to act like it.

*Carl Safina is founding president of Blue Ocean Institute at Stony Brook University.*

*Brett Jenks is the President and CEO of Rare, a global conservation organization based in Arlington, Virginia actively working with local communities in Latin America, Indonesia, the Philippines and China on solutions that enable both people and planet to flourish.*



Trap fishermen in their dhow, Pemba Island, Tanzania. Photo © Carl Safina

## NEW DIRECTIONS FOR BLUE OCEAN

Blue Ocean Institute's goals remain both modest and ambitious: We seek to remain physically small, economically efficient and disproportionately influential. We believe that being small helps us achieve very big things. But, you can't simply go out and buy intellectual leadership and inspired big-picture thinking. That kind of excellence has to be in your bones. Fortunately for us and for those who support us, it's in our bones.

Blue Ocean Institute's most unique asset is Dr. Carl Safina. His writings about our moment with nature are often featured in top-tier newspapers, magazines and science journals, websites and commercial book publishers. The television series, *Saving the Ocean with Carl Safina*, airs on PBS. And, media coverage about the Institute is frequently showcased on CNN, NPR and the *New York Times*, among others.

### Here's what's in the works for 2013, and beyond.

#### ● BOOKS & ARTICLES

It's not surprising that Dr. Safina is hard at work on another book, but it may surprise you to learn that its subject goes beyond oceans. This time, we will go deep into the geographic territories and terrains of whales, elephants, apes and others, to see them, and to see ourselves, in a more realistic light.

#### ● BLOGS

Safina has established an enthusiastic online presence for a global audience. His blogs appear on [nationalgeographic.com](http://nationalgeographic.com), [huffingtonpost.com](http://huffingtonpost.com), [blueocean.org](http://blueocean.org), [carlsafina.org](http://carlsafina.org) and other popular sites. Our blogs report discoveries, convey analyses and share opinions on subjects ranging from fishing to faith, and politics to polar bears. User warning: our analyses are well informed and strongly reasoned; we are not shy about sharing our opinions!

#### ● TELEVISION & FILM

*Saving the Ocean, with Carl Safina* is an influential television series about conservation solutions. Season One premiered in October 2012 on PBS. Its 10 episodes may be viewed after airing, free of charge, at <http://video.pbs.org/program/saving-the-ocean/>. We are currently seeking funding for Season Two.

We are also working with the Film Board of Canada, and have participated in their documentary about the exploitation and conservation of the 1,000-pound bluefin tuna that appear each summer and autumn in fishing communities of Nova Scotia and Prince Edward Island.



#### ● EDUCATION IN 2013

We'll seek new opportunities to reach the next generation of conservationists, exploring partnerships and exciting web offerings to reach educators and students across the globe.

#### ● THE OCEAN ON GOOGLE EARTH

This may be a game-changer in bringing the oceans—and the ways we're changing them—to people worldwide. Through the kindness of pioneering oceanographer and Blue Ocean Honoree Sylvia Earle, we are bringing Dr. Safina's books to "Google Ocean." Primary sites and quotes in Safina's books are being added to the Ocean layer of Google Earth. *The View From Lazy Point* and *A Sea in Flames* are already live, with more books to follow.

#### ● SOCIAL OCEAN

We'll continue to build our interconnected hub of information about top ocean issues by linking the Issues section of our website to blogs, scholarly articles, tutorials, the PBS series' website, social media pages, The Ocean on Google Earth and partner sites. Social Ocean is an exciting way to build community, support and advocacy.

#### ● SUSTAINABLE SEAFOOD

Plans are in the works to develop and promote downloadable materials for health care professionals that support personal and ocean health. Media outreach to promote our unique online course, Green Chefs/Blue Ocean, will also ramp up with the assistance of our partner, Chefs Collaborative.

#### ● MERCURY IN SEAFOOD

Mercury is an impurity in coal, and after 200 years of burning millions of tons of coal, we've put so much mercury into the air that it is present in virtually all seafood. The answer to this health threat isn't "avoid seafood," it's "avoid mercury." We'll show you how, and we'll update you on new studies and discoveries.

#### ● ACADEMIC PARTNERSHIPS

In 2013, Dr. Safina will be involved in writing projects with researchers at Duke University and will be returning to Colby College as their first Distinguished Mellon Fellow. Our primary academic partner and our home is at Stony Brook University (SBU) on Long Island, where we continue our work on the mercury project with researchers in the School of Marine and Atmospheric Sciences. Dr. Safina will continue as co-chair of SBU's Center for Communicating Science, which was founded at the urging of actor and ambassador of science, Alan Alda.

## MILESTONES AND FIRSTS

Each year we take great pleasure in sharing top achievements in our annual report. 2012 was another year of note as Blue Ocean Institute used the power of scientific research, acclaimed books, film festivals and a new television series on PBS to share our message with the world. Here's a list of key awards, publications, honors and "firsts" since our founding in 2003.

### ● 2012

Blue Ocean Fellows Program launched in November. First Fellows: author Paul Greenberg and shark expert, Dr. Demian Chapman.

*The View from Lazy Point, A Natural Year in an Unnatural World* wins 2012 Orion Magazine Book Award.

Six new episodes of "Saving the Ocean with Carl Safina" filmed to complete first year of the PBS series. Episodes premiere in October, 2012.

"The Sacred Island," episode of "Saving the Ocean with Carl Safina" PBS series named finalist at the BLUE Ocean Film Festival, "Innovations and Solutions" category.

Carl Safina blogs for Huffington Post; begins blogging for *National Geographic*.

Blue Ocean Institute more than doubles its Facebook and Twitter audiences.

Blue Ocean Institute moves to Stony Brook University's School of Marine and Atmospheric Sciences.

Blue Ocean Institute launches new and expanded website: [www.blueocean.org](http://www.blueocean.org).

Blue Ocean releases comprehensive overview, "MERCURY: Sources in the Environment, Health Effects and Politics," written by Sharon Guynup; intro and summary by Carl Safina.

*A Sea in Flames: The Deepwater Horizon Oil Blowout* named to Top Ten List by the Project on Government Oversight.

Carl Safina receives Ocean Hero Award from Diver magazine.

Research scientists Alan Duckworth and Bradley Peterson's "Effects of seawater temperature and pH on the boring rates of the sponge *Cliona celata* in scallop shells" published in September issue of *Marine Biology*.

Carl Safina selected as "Long Island's Man of the Year in Science" by the *Times Beacon Record*.

### ● 2011

Carl Safina's fifth book, *The View from Lazy Point, A Natural Year in an Unnatural World*, published in January to rave reviews.

Carl Safina profiled in the *The New York Times*.

Carl Safina's sixth book, *A Sea in Flames, The Deepwater Horizon Oil Blowout*, published in April to excellent reviews.

Both books selected as *The New York Times Book Review*, "Editor's Choice."

Carl Safina is interviewed on PBS, NPR, and in magazines from *TIME* to *Rolling Stone*, and on dozens of other stations.

FishPhone text messaging app reaches its 100,000th query.

Carl Safina wins James Beard Award for Journalism – Environment, Food Politics and Policy.

Carl Safina and Alan Duckworth invited to write "Fish Conservation" chapter in the *Encyclopedia of Biodiversity*, 2nd edition.

Carl Safina nominated for the 2012 Indianapolis Prize.

Carl Safina named among "Twenty-Five Visionaries Who Are Changing the World" by *Utne Reader*.

Carl Safina writes "The 2010 Gulf of Mexico Oil Well Blowout: a Little Hindsight" published in *PLoS Biology*.

First two episodes of "Saving the Ocean with Carl Safina" air on more than 100 PBS television stations across the U.S.

Two new episodes of "Saving the Ocean" completed.

*The View From Lazy Point* named *PopTech*'s list of 8 Great Holiday Reads.

*The View from Lazy Point* included in *Newsday*'s Top 11 Books of 2011.

### ● 2010

Carl Safina's first children's book *Nina Delmar and the Great Whale Rescue* is published.

Carl Safina testifies before Congress regarding the Gulf oil blowout. Carl Safina interviewed on The Colbert Report, MSNBC, CBS TV, PBS' "Need to Know," "The Leonard Lopate Show" (NPR), Globo News-Brazil, News 12 Long Island, Democracy Now, CNN, BBC Radio, and many others.

Carl Safina invited to give a talk at the TEDx Oil Spill Conference; talk quickly moves to main TED.com homepage.

Special Oil Spill web section added to [www.blueocean.org](http://www.blueocean.org).

*continued*

## MILESTONES AND FIRSTS

FishPhone launches a new app; receives stellar media coverage.

Blue Ocean establishes partnership with Whole Foods Market to provide seafood rankings in stores.

Mercury in Fish Project launched in collaboration with The Gelfond Fund for Mercury Related Research & Outreach at Stony Brook University.

Carl Safina becomes co-chair of steering committee for the Center for Communicating Science at Stony Brook University. The Center is an innovative collaboration between SBU's Journalism School and the School of Marine and Atmospheric Sciences.

Carl Safina wins Sylvia Earle Award presented at the Blue Ocean Film Festival.

Carl Safina wins Guggenheim Fellowship in Natural Sciences Science Writing.

Safina wins Lifetime Achievement Award from the International Wildlife Film Festival.

Blue Ocean Institute establishes partnership with Google Ocean.

Carl Safina writes "The Moral Climate" chapter in Moore and Nelson's *Moral Ground, Ethical Action for a Planet in Peril*.

### ● 2009

Carl Safina's "Darwinism Must Die So That Darwin May Live" published in *The New York Times*.

Hardt and Safina's "Threatening Ocean Life from the Inside Out" published in *Scientific American*.

Next Wave's Ocean Science Literacy Workshops raise awareness of the ocean and Google Earth technology for English Language Learning students.

Safina's "A Future for U.S. Fisheries" published in *Issues in Science and Technology*.

FishPhone App receives a "Best in Green" award by Ideal Bite, a green-living website.

FishPhone App receives major media coverage from *The Wall Street Journal* and *The New York Times* to *Bon Appetit*, *Gourmet*, *Condé Nast Traveler* and *Parade* magazine (resulting in 4,000 queries in a single day).

Green Chefs/Blue Ocean launched: online sustainable seafood course for chefs and culinary students.

### ● 2008

Carl Safina and DH Klinger's "Collapse of Bluefin Tuna in the Western Atlantic" published in *Conservation Biology*.

Carl Safina's first book, *Song for the Blue Ocean, Encounters Along the World's Coasts and Beneath the Seas* named "One of 12 Most Influential Environmental Books of All Time" by Environmental Defense Fund.

Blue Ocean Institute invited to establish science office at the School of Marine & Atmospheric Sciences at Stony Brook University.

Blue Ocean distributes its 2.5 millionth ocean-friendly seafood guide.

Carl Safina's "Toward a Sea Ethic" published in *The American Prospect's* "Ocean & Coasts" special report.

Marah Hardt and Carl Safina's "Carbon's Burden on the World's Oceans" published online at *Yale Environment 360*.

### ● 2007

Blue Ocean forms the Friendship Collaborative with Ken Wilson, Senior Pastor of Vineyard Church of Ann Arbor, MI, to further dialogue between scientists and evangelical Christian leaders.

Blue Ocean launches FishPhone, the nation's first sustainable seafood text-messaging service, plus a downloadable seafood guide for cell phone and PDA users at fishphone.org.

Carl Safina's article, "On the Wings of the Albatross," with photographs by Frans Lanting, featured in *National Geographic* magazine.

New television series, "Saving the Ocean with Carl Safina," developed for PBS by Safina and producer John Angier. Pilot segments filmed in Belize and Zanzibar.

Blue Ocean partners with Stony Brook University's School of Marine and Atmospheric Sciences to collaborate on climate change research and science communication.

### ● 2006

Carl Safina's third book, *Voyage of the Turtle, In Pursuit of the Earth's Last Dinosaur*, is published to critical acclaim.

*Voyage of the Turtle, In Pursuit of the Earth's Last Dinosaur* selected a *New York Times Book Review* "Editors' Choice."

Carl Safina gives invited talk at the World Economic Forum in Davos, Switzerland on the status and future of fisheries and the oceans.

U.S. poet-laureate Billy Collins helps launch Blue Ocean's Sea Stories literary project with his poem "Coastline."

Carl Safina awarded George B. Rabb Medal from Chicago Zoological Society, Brookfield Zoo.

Carl Safina addresses a conference convened by the Center for Health and the Global Environment at Harvard and the National Association of Evangelicals to help create a conservation-oriented "Urgent Call to Action."

Carl Safina awarded Bianimale Foundation Fellowship.

### ● 2005

Blue Ocean's Hawaii-based Marine Ecology and Fishery Specialist, Eric Gilman, produces "Catch Fish, Not Turtles," a booklet in several languages created to help fishermen avoid catching sea turtles while fishing.

Carl Safina receives an Honorary Doctorate from State University of New York.

Carl Safina and four co-authors' "U.S. Ocean Fish Recovery; Staying the Course" published in *Science* magazine.

● 2004

Mercédès Lee gives an invited talk at the World Bank, bringing global attention to ocean conservation and the importance of seafood sustainability as a food security concern.

Carl Safina and Sarah Chasis' "Saving the Oceans" published in *Issues in Science and Technology*.

● 2003

Blue Ocean Institute launched by MacArthur fellow Dr. Carl Safina and Mercédès Lee.

Carrie Brownstein, Mercédès Lee and Carl Safina's first fully transparent methodology for sustainable seafood ranking, "Harnessing Consumer Power for Ocean Conservation" published in *Conservation* magazine.

Mercédès Lee wins Renewable Natural Resources Foundation Outstanding Achievement Award for her book *Seafood Lovers Almanac*.

Partnership established between Blue Ocean and Atlantis Marine World Aquarium in Riverhead, Long Island, NY as the basis for a new education program.

Carl Safina's book *Eye of the Albatross, Visions of Hope and Survival* awarded John Burroughs Writer's Medal.

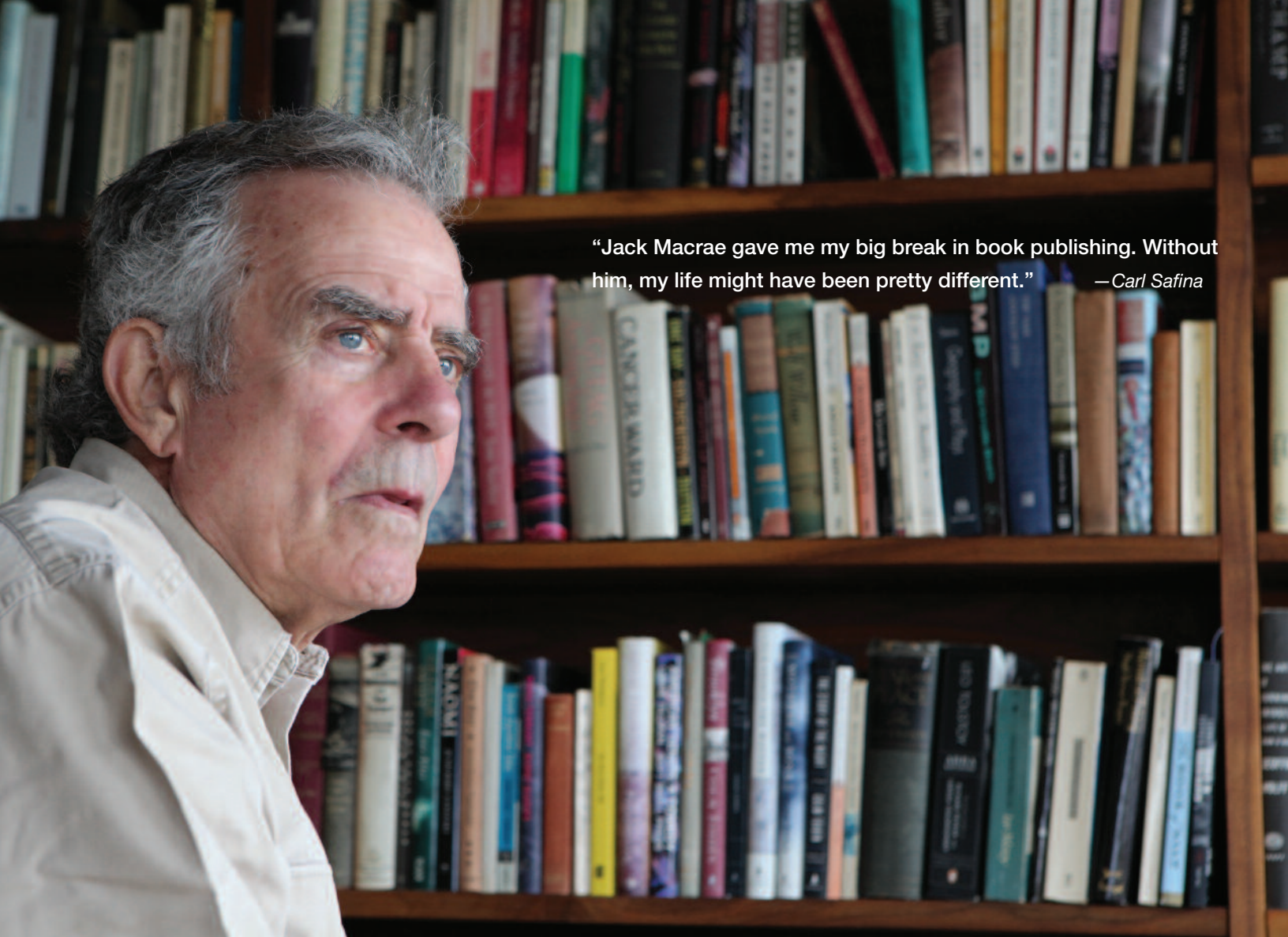
Carl Safina's *Eye of the Albatross, Visions of Hope and Survival* named "Year's Best Book for Communicating Science" by National Academies of Science, Medicine and Technology.

Carl Safina writes the foreword for a new edition of *The Sea Around Us* by Rachel Carson.

Carrie Brownstein, Mercédès Lee and Safina's "Harnessing Consumer Power for Ocean Conservation" published in *Conservation in Practice*.

Carl Safina receives Rutgers University George H. Cook Distinguished Alumnus Award as Most Distinguished Alumnus in 50-year history of the Ecology and Evolution Graduate Program.





**“Jack Macrae gave me my big break in book publishing. Without him, my life might have been pretty different.”** — Carl Safina

Photo © Matt Mays

#### DONOR/BOARD PROFILE

## John “Jack” Macrae, III

Henry Holt Imprint, John Macrae Books

In the publishing world, Jack Macrae is well recognized for cultivating the germ of an idea into a brilliant book. He has edited and published Jorge Luis Borges, David Levering Lewis, Ed Abbey and Calvin Tomkins and Hilary Mantel, as well as four of Carl Safina’s books. Today, he manages the Henry Holt imprint, John Macrae Books.

To make book buying even more inviting, Macrae and his wife, art gallery pioneer Paula Cooper, own and operate “192 Books,” a beloved independent bookstore

on 10th Avenue in Manhattan.

Macrae is also a friend to conservation through his longtime support of Blue Ocean Institute, and with his wife, support for efforts in marine science education and research. For example, not long ago the couple generously donated a four-acre property located on the Forge River to the School of Marine and Atmospheric Sciences at Stony Brook University (SoMAS).

A man who prefers action to complaint, when making the SoMAS donation, Macrae

said, “It’s easy enough to rail against environmental degradation, it’s something else to come up with a workable plan that restores life to the Forge River estuary and others like it on Long Island.”

Carl Safina gratefully acknowledges the support and friendship of Jack Macrae. “I’m very lucky to have Jack as my friend and editor,” Carl says. “Jack is quite simply the finest man I’ve ever known.”

## MAKING WAVES

Blue Ocean Institute's message has reached diverse, global audiences through television, radio, print and social media. The interviews, articles, lectures, blogs, awards and media coverage help us reach a wide range of audiences, from scientists and chefs to social justice and sustainable energy advocates.

### Interviews with Carl Safina- Radio/TV/Webcasts

- *Lopate and Locavores: Sustainable Seafood*, The Green Space, WNYC 93.9 FM, New York, NY
- *The Promised Land*, hosted by Majora Carter, WNYC 93.9 FM, New York, NY
- *Bonnie Grice Live*, WPPB 88.3 FM, Long Island, NY
- *Senator Bill Bradley's American Voices*, Sirius XM, Channel 107
- *Locus Focus*, KBOO 90.7 FM, Portland, OR
- *What Now? with Ken Rose*, KOWS 107.3 FM, Occidental, CA
- *Kojo Nnamdi*, WAMU 88.5 FM, Washington, DC
- Interview, Pacifica 90.1 FM, Houston, TX
- *Talk of Alaska*, KSKA 91.1 FM, Anchorage, AK
- *A Thirty Year Plan*, Orion Magazine web event

### Carl Safina's Blogs, Essays, Commentary & Media Coverage

- "Sandy Said What Presidential Candidates Were Afraid to Say." CNN.com
- "Rebuilding After Sandy is Too Big a Risk," CNN.com
- "As Fisheries Service Dithers, New England Porpoises Drown," by Safina and Andrew Read, NationalGeographic.com
- "Hurricane Sandy - Not Over by a Long Shot," *Huffington Post*
- "Enough Duck Shooting," *Huffington Post*
- "Bluefin Tuna: New Record Price for Carcass Further Devalues the Fish," *Huffington Post*
- "Better Than Mayan Calendar, and Perhaps Even Less Probable: Overfishing to End in 2012," *Huffington Post*
- "Shark Attacked, Media Bites Rosie O'Donnell," *Huffington Post*
- "National Geographic Channel, In Race for Bottom, Adds Killing Endangered Species to New Season Entertainment Lineup," *Huffington Post*
- "Oil and Herring Don't Mix," *Huffington Post*
- "Seabirds: The Other Seafood Lovers," *Huffington Post*
- "Lingering Doubts About Obama's Keystone Pipeline Decision," *Huffington Post*
- "Will National Geographic TV's Wicked Tuna Be Better Than Advertised?" *Huffington Post*
- "What Bid Do I Hear for the Life of That Thar Whale?" *Huffington Post*
- "In Praise of Inefficiency," *Huffington Post*
- "Whole Foods Market Bans 'Red'-Coded Seafood," *Huffington Post*
- "Nat Geo's Controversial New TV Show, *Wicked Tuna*, Debuts," *Huffington Post*
- "How Many People Can the World Support? It Depends," *Huffington Post*
- "How to Make Population Growth Reverse Itself," *Huffington Post*

- "Farewell, Whole New Time," *Huffington Post*
- "Water Enough For All?" *Huffington Post*
- "Knocking on Heaven's Shore: Bluefin Tuna Carrying Safe Fukushima Nuclear Radiation," *Huffington Post*
- "How to be Important After Graduation," *Huffington Post*
- "They Left Us Bones," *Huffington Post*
- "Good on Ya, Mate! Australia Protects Incredibly Big Ocean Area," *Huffington Post*
- "Reefs in the Anthropocene – Zombie Ecology?" guest author on Andrew Revkin's DotEarth blog, *New York Times*
- "Life Finds a Way -- But Needs Our Help." *Huffington Post*
- "Lazy Point Offers Lessons of Concern for our World," *Chautauquan Daily*
- "Is It Too Late to Save Our Oceans?" *Organic Connections*
- "Can Our Oceans Be Saved? Carl Safina Thinks So," *Living Green*
- "Travellers' Impact on Coral Reefs," *BBC Travel*
- "Scourge of the Lionfish," "Scourge of the Lionfish, Part 2: Counterattack," "Scourge of the Lionfish, Part3: The Newest Fish in the Kitchen," and "Scourge of the Lionfish, Part4: From Beautiful Novelty to Marine Invader," guest author on Mark Bittman's blog, *New York Times*
- "How 'Silent Spring' Ignited the Environmental Movement," *New York Times Magazine*
- "48th Annual Nobel Conference to Tackle the Ocean," *The Free Press*
- "Lament for the Blue Ocean," *AFLOAT*
- "Swimming With Giant Tuna," *Huffington Post*
- "Mastering Sustainable Seafood: A Conversation with Carl Safina," cover story, *Chef Educator Today*
- "How to Catch Fish and Save Fisheries" by Carl Safina and Brett Jenks, op-ed, *New York Times* and *International Herald Tribune*
- "Eating Seafood Sustainably," *Today's Dietitian*
- Academy-award winning director of *The Cove*, Louie Psihoyos, interviewed Carl Safina at Lazy Point for inclusion in Psihoyos' next movie.

### Carl Safina's Blogs Reposted on Partner Websites

- Chedd-Angier (Producer's site, *Saving The Ocean* PBS series)
- Okeanos Foundation for the Sea
- One World One Ocean
- Pacific Voyagers
- The TerraMar Project
- *Utne Reader* Magazine

### Science Publications – Blue Ocean Institute

- "Maxing Out Our Take," book review by Carl Safina, *Science*, Vol 335
- "Effects of seawater temperature and pH on the boring rates of the sponge *Ciona celata* in scallop shells" by Alan Duckworth and Bradley Peterson, *Marine Biology*
- Fish Conservation chapter updated by Carl Safina and Alan Duckworth, 2nd edition, "Encyclopedia of Biodiversity," to be released in January, 2013
- "MERCURY: Sources in the Environment, Health Effects, and Politics," comprehensive overview written by Sharon Guynup. Intro and Summary by Carl Safina. Available online: [www.blueocean.org](http://www.blueocean.org). *continued*

## MAKING WAVES

### Lectures, Keynote Speeches and Public Talks by Carl Safina

- Amagansett Library, Amagansett, NY
- Antarctica Tour Lecturer, Lindblad Expeditions - Patagonia, South Georgia and The Falklands
- BLUE Ocean Film Festival, Monterey, CA
- Blue Vision Summit, Washington, DC
- Book Revue, Huntington, NY
- Canio's Books, Sag Harbor, NY
- Chautauqua Literary Festival, Chautauqua, NY
- Colby College, Waterville, ME
- Communicating Science Summit, New York, NY
- Connecticut College, New London, CT
- D.E. Shaw's Social Impact Forum, New York, NY
- Devon Yacht Club, East Hampton, NY
- Fish Forever: A Symposium at Sea, Baja, Mexico
- Galley Society, New York, NY
- Gustavus Adolphus Nobel Conference, St. Peter, MN
- North Shore Land Alliance, Laurel Hollow, NY
- North Shore Tech Council, Danvers, MA
- NYSOE Conference, Upton, NY
- Overbrook Foundation, New York, NY
- SoMAS Convocation, Stony Brook University, Stony Brook, NY
- University of Rhode Island Ocean Event, Kingston, RI
- WBGH Editors' Conference, Boston, MA
- Yale School of Forestry & Environmental Studies, New Haven, CT
- Cazenovia College, Syracuse, NY
- UPCEA Conference, Portland, OR

### Lectures by Sustainable Seafood Program Staff

#### Kate McLaughlin:

- New York State Dietetic Association's annual meeting in Albany, NY
- Whole Foods Market event in Manhattan
- Suffolk County Community College presentation, Brentwood, NY

#### Dr. Alan Duckworth:


- "Great Barrier Reef: Environmental Issues and Policy" School of Marine & Atmospheric Sciences, Stony Brook, NY
- "Fishery Science and Management" lecture at Bard College, Annandale-on-Hudson, NY

### Awards and Honors

- *The View from Lazy Point, A Natural Year in an Unnatural World* wins 2012 Orion Magazine Book Award.
- "The Sacred Island," episode of "Saving the Ocean with Carl Safina" PBS series named finalist at the BLUE Ocean Film Festival, "Innovations and Solutions" category.
- Carl Safina selected as "Long Island's Man of the Year in Science" by the *Times Beacon Record*.
- *A Sea in Flames: The Deepwater Horizon Oil Blowout* named to Top Ten List by the Project on Government Oversight.
- *The View from Lazy Point, A Natural Year in an Unnatural World* named to PopTech's list of 8 Great Holiday Reads.
- Carl Safina receives Ocean Hero Award from Diver magazine.

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**STRANGEST**

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# The Blue Ocean Institute Summary Statement of Financial Position

May 31, 2012

## Assets

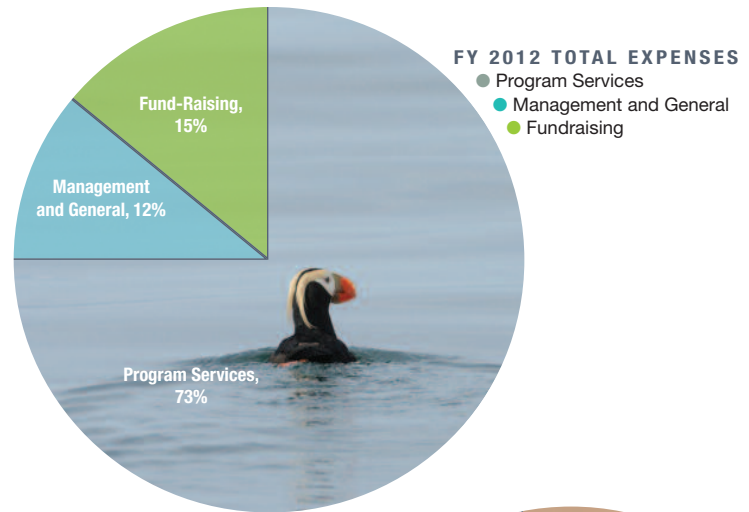
Cash and Interest Bearing Deposits	\$204,987
Investments	\$120,335
Contributions and Pledges Receivable	\$179,907
Other Asset	\$39,983
<b>TOTAL ASSETS</b>	<b>\$545,212</b>

## Liabilities

Accrued Expenses	\$27,449
Total Liabilities	\$27,449

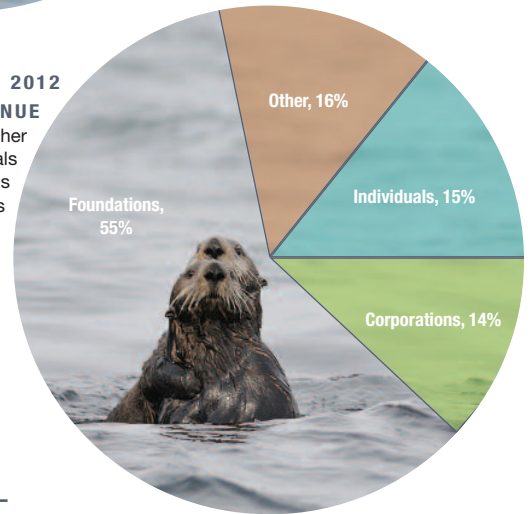
## Net Assets

Unrestricted	\$366,718
Temporarily Restricted	\$71,045
Permanently Restricted	\$80,000
Total Net Assets	\$517,763
<b>TOTAL LIABILITIES AND NET ASSETS</b>	<b>\$545,212</b>



## FYI 2012 OPERATING REVENUE

- Other
- Individuals
- Corporations
- Foundations



# The Blue Ocean Institute Summary Statement of Activities

Year Ended May 31, 2012

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
<b>PUBLIC SUPPORT AND REVENUE:</b>				
<b>Public Support:</b>				
Contributions	428,087	291,888	-	719,975
Revenue	194,581	-	2,117	196,698
Net Assets Released from Restrictions	602,080	(599,963)	(2,117)	-
<b>TOTAL PUBLIC SUPPORT AND REVENUE:</b>	<b>1,224,748</b>	<b>(308,075)</b>	<b>-</b>	<b>916,673</b>
<b>EXPENSES:</b>				
Program Services:	754,519	-	-	754,519
<b>Supporting Services:</b>				
Management and General	117,049	-	-	117,049
Fund-raising	160,855	-	-	160,855
<b>Total Supporting Services:</b>	<b>277,904</b>	<b>-</b>	<b>-</b>	<b>277,904</b>
<b>TOTAL EXPENSES:</b>	<b>1,032,423</b>	<b>-</b>	<b>-</b>	<b>1,032,423</b>
<b>Increase (Decrease) in Net Assets Before Other Increases</b>	<b>192,325</b>	<b>(308,075)</b>	<b>-</b>	<b>(115,750)</b>
<b>Other Increases:</b>				
Unrealized Gain on Investments	2,316	-	-	2,316
<b>Increase (Decrease) in Net Assets</b>	<b>194,641</b>	<b>(308,075)</b>	<b>-</b>	<b>(113,434)</b>
<b>Net Assets, beginning of year</b>	<b>172,077</b>	<b>379,120</b>	<b>80,000</b>	<b>613,917</b>
<b>Net Assets, end of year</b>	<b>\$366,718</b>	<b>\$71,045</b>	<b>\$80,000</b>	<b>\$517,763</b>

Blue Ocean Institute's complete audited financial statement may be obtained by writing to:

Mayra Mariño, Business Manager  
 Blue Ocean Institute at Stony Brook University  
 Dutchess Hall #137  
 School of Marine and Atmospheric Sciences  
 Stony Brook, NY 11794-5000

# HOW TO BE IMPORTANT AFTER GRADUATION

(ANYTIME REALLY)

School of Marine and Atmospheric Sciences Convocation Address  
given by Dr. Carl Safina in May, 2012 at Stony Brook University, Stony Brook, NY

GRADUATION IS ALWAYS A JOYFUL TIME. For the students, a lot of hard work has paid off. And for many parents, a lot of hard paying off has worked. So I'd like to share a few commencement remarks.

As a marine biologist who has earned three degrees, working toward a degree has always seemed like being a salmon swimming up a river: Full of energy and enthusiasm — excited! — you enter the flow. You really have no idea what's coming. You encounter a constant struggle against the current. But determined, you keep swimming, always working hard. You stick with it. And by the time you realize you've been so busy swimming upstream so hard, for so long, that there's almost no time left for sex — it's suddenly over. And you think: "Too soon! More sex would have been nice."

I have been lucky enough to watch my life proceed from being that hopeful, hopeless new graduate, so uncertain of my own worth, so unconvinced of my talent, to the man I am today — so uncertain of my own talent, so unconvinced of my worth.

It is from this wellspring of insecurity, but with a post-graduation resume that satisfies my mother, that I offer ten simple steps to succeeding and becoming important:

1. **BE VERY LUCKY.** Success depends mainly on luck. So remember this: Luck is too important to leave to chance. Don't wait for luck. Don't hope for luck. Make luck happen. I'm not talking about wish-upon-a-star, fantasy kind of luck, like wishing to win the lottery. But rather the luck that you engineer. Like the luck of winning a marathon for which you've trained hard. Self-made luck is rooted in reality and hard work, skill exerted, odds tipped slightly in your favor by your own insight and muscle. Work and thought create luck. Generosity and compassion create luck. Kindness creates luck.
2. **NEVER GROW UP.** The most successful people remain playful. Be wildly idealistic. Dream up unlikely schemes. Take healthy risks. And once you've imagined a better world, pick one part of that world you envision. Then roll up your sleeves and devise a way to make it happen. Dream — then get there. Henry David Thoreau, perhaps the truest and greatest American, said: "If you have built sand castles in the air... there is where they should be. Now put foundations under them." The best idealists are also highly pragmatic.

## ESSAY

3. **THE BEST PRAGMATISTS ARE CURIOUS.** Always be curious. To be interesting, be interested.
4. **FAIL.** If you're not occasionally failing, you're probably being too timid. People who succeed are not afraid to fail. They are the people who, after failing — after being rejected or passed over — pick themselves up and keep at it. Every great achievement risked failure; every achiever has risked failure. Never let fear of failing prevent you from attempting something that could be terrific.
5. **NEVER GIVE UP.** Be patient. It's too easy to think, "What's the use?" or "This is no good," or "Why bother?" or "I can't." Just stay patiently in the game. When things seem so bleak that you can't see the way out, simply wait. Dawn will come. Better, take just a small step. Life can be like walking with a flashlight on a dark night. You might not be able to see your destination, but each small step illuminates the next few steps — and you can make the whole trip that way.
6. **TAKE YOURSELF SERIOUSLY.** We are constantly bombarded by messages from people who want to trivialize us so they can control us. They make us think, "I'm not good enough," or "My efforts aren't good enough." Ignore those thoughts. Yes, the world is complicated and beyond your control. But that's only partly true. A lot of your life will actually be up to you. So have faith in yourself. Immediately reject anyone seeking to discourage you. Especially if that person is you. The great thinker Ralph Waldo Emerson said, "In every work of genius we recognize our own rejected thoughts; they come back to us with a certain alienated majesty." Cherish your own ideas. Put them in writing and keep them in a safe place. Honor them with energy. Work on them and make them grow. Embrace encouragement, find mentors — and mentor others.
7. **WHILE TAKING YOURSELF SERIOUSLY, NEVER TAKE YOURSELF TOO SERIOUSLY.** No one upon their death bed ever said, "I wish I had spent more time in the office." Busyness destroys relationships. Love is all you need.
8. **IF YOU SEEK POWER**—and perhaps you should, because life can bury the weak—seek not the power to control others. Seek instead the kind of power that prevents others from controlling you. Never strive to prove anything to anyone — except yourself. The more you measure yourself by the yardsticks others give you, the more they determine your life and drain you of your own. Develop your own measures of success, even if they differ from the norm, and you will be running your own race, not the rat race.
9. **NEVER CHASE MONEY.** You are not the product of four billion years of evolution just so you can own a cluttered garage. The human mind is the most complex thing in the known universe. Use yours. Never make excuses against your own heart. Never talk yourself into things. Always pursue truth. Always do the right thing. Act always with integrity. Be true. Rise above. You will make yourself someone rare and valuable. Then instead of chasing money, you'll find money chasing you — and along will come satisfactions that cannot be bought at any price.
10. **REALIZE THIS:** the world is on fire. As Winston Churchill said, "We make a living by what we get; we make a life by what we give." The most satisfying thing the human mind can experience is the realization that it is serving a worthy cause. Seek to help heal the world. A life of service will make you both the most satisfied, and most important, person you can hope to be.

Now in just a little while, you will go — and you will begin to make your own luck. After all, that's the approach that's already gotten you this far. So take the credit for having earned a little faith in yourself. Congratulations, and best of making your own luck!

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Please accept our profound gratitude. Because of your support and partnership in 2012, Blue Ocean Institute has reached a global, diverse audience with our unique narratives from the front lines of ocean wildlife conservation. Our books, PBS television series, scientific research and other products from far afield, describe the changing ocean, its challenges, practical solutions, the intertwined fate of nature and human dignity and reasons for hope. **WE SALUTE YOU.**

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“Sven is a wide-ranging thinker. He’s not only interested in conservation and tourism, he’s interested in ideas about how conservation can be made more successful.” —Carl Safina



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## Sven-Olof Lindblad

### Lindblad Expeditions

Some of the best alliances are forged over cocktails so perhaps it’s not surprising that Carl Safina first met Sven-Olof Lindblad at a Lindblad-sponsored rooftop cocktail party where Carl was a featured speaker. The conversation that began that evening continues 10 years later.

Sven-Olof Lindblad, a member of the Board of Directors at Blue Ocean Institute, comes by his love of adventure and conservation honestly. His father was entrepreneur and explorer Lars-Eric Lindblad, who is often called the “father of eco-tourism.” The elder Mr. Lindblad founded Lindblad Travel, which focused on creating experiences that foster an understanding and appreciation of the most remote and pristine places on the

globe. As a child, Sven traveled extensively with his father. He spent six years in East Africa photographing elephants and wildlife and assisting filmmakers on a documentary about the destruction of African rainforests.

Informed by family and driven by his own passion for conservation, Sven founded Special Expeditions as a division of Lindblad Travel, moving the company to further its mission of offering innovative and educational marine-focused travel expeditions. The name was later changed to Lindblad Expeditions.


Today, in partnership with National Geographic, trips combine research, technology and conservation for extraordinary travel experiences. Their growing fleet of small expedition ships, Zodiacs, sea kayaks and

onboard Naturalists and underwater cameras, inspire very personal explorations that connect travelers with remarkable places. This kind of exploration shows great promise for transforming travelers into a force for preserving and protecting the environment.

Sven-Olof Lindblad continues a family legacy while forging his own path. Luckily for the rest of us, he invites us along for the ride.

Sven has been a great friend to Blue Ocean and to Carl Safina and his family. He is great fun to be with on a beach or aboard a boat. And Sven is always ready to help, or to pose a challenging question that becomes a thinking and learning experience.

To read more, visit [www.expeditions.com](http://www.expeditions.com).



“Can timeless creatures continue the journey with us into a changing world? Will we let them? This is the main question of our moment with nature. Over a history longer than our own, they have proven resilient in the face of change. Yet others have succumbed along the way. And now we challenge these survivors with changes of our own making, at a pace over which we have lost control. To do this is to risk losing them, and losing their innocence in the world, at our expense and on our watch. And the cautionary message for us is no less clear. They have shown an ability to survive past changes. We have not.” —*Carl Safina*