Autumn 2009

CORAL CURRENT

The Newsletter of the Coral Reef Alliance

Sustainable Marine Tourism Standards Adopted in West Hawaii

By Liz Foote, Hawaii Field Manager

The summer of 2009 marked a milestone for CORAL's work in Hawaii: the successful balloting of four voluntary standards for marine tourism in West Hawaii. Through a process begun in early 2008, the West Hawaii community developed standards for SCUBA Diving and Snorkeling, General Boating (including kayaking and surf schools), Wildlife Interactions (including dolphins, whales, monk seals, turtles, manta rays, sharks, and invertebrates), and Shoreline Activities. West Hawaii now joins Mesoamerica as the only coral reef locations to work with CORAL in adopting industry standards for sustainable marine recreation.

Kona Field Representative Kara Osada-D'Avella worked with a taskforce of local stakeholders comprising commercial marine recreation operators; NGOs; county, state, and federal agencies; purchasers; and other local community members. Through many meetings and discussions, both in person and online, the drafts of the standards were developed, reviewed, and revised in an iterative consensus-building process.

Development of the standards was only the beginning, and the next phase of implementation and field-testing is now underway. Companies are still in the process of adopting the standards (see sidebar), and will also assist CORAL in evaluating them for their overall effectiveness, attainability, and affordability. This multifaceted effort is being accomplished through passenger exit surveys, self-assessments, peer reviews, and third-party anonymous community reviews.

In addition to the evaluation, CORAL is actively assisting with standards implementation through the development and dissemination of educational tools and materials, along with specialized training in sustainable marine recreation to help companies communicate key messages to their clients and enforce the standards. Materials such as educational bag tags, interpretive flip charts, and an environmental pledge were developed collaboratively by taskforce members and several individuals forming the newly-established CORAL Reef Leadership Network.

Dolphin Journeys' clients review the environmental pledge before departure on a charter
Photo by Nancy Sweatt

The environmental pledge is now available for adaptation and implementation by commercial tour operators. The pledge provides operators with a mechanism to convey best practices to their clients, so that both parties can hold each other accountable for demonstrating and following these practices. Several companies have already utilized the pledge in various ways, such as posting it as a laminated poster onboard their vessels, passing it around as a laminated page to be initialed by clients, or integrating it into their own liability waivers and charter manifests. These strategies eliminate paper waste and ensure that all clients have reviewed the terms of the pledge before participating in the marine tourism activity.

For more information about the standards, the development process, and the companies that have signed on, visit **www.westhawaiimarinetourism.org**.

Working Together to Keep Coral Reefs Alive

The Coral Reef Alliance (CORAL) unites and empowers communities to save coral reefs. We help the people who live near reefs protect their fragile resources by providing the means to develop local projects that save coral reefs and benefit communities.

West Hawaii companies that have signed on to adopt, implement, and field-test the standards (as of 8/28/09):

Big Island Divers
Body Glove Cruises
Bottom Time Hawaii
Captain Zodiak
Dive Makai
Dolphin Journeys
Fair Winds
Hawaii Pack and Paddle
Honu Sports
Hula Kai
Jack's Diving Locker
Kona Boys
Kona Honu Divers
Mara's Dive
Mele Naia
Mike's Surf School
One Love One Spirit
Pirate Divers
Sea Rafting Hawaii

For a complete and updated list, visit www.westhawaiimarinetourism.org.

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For comments, questions, or contributions to *CORAL Current*, please email us at communications@coral.org.

Misool Eco Resort, Raja Ampat
Photo by CORAL staff

BREAKING NEWS FROM CORAL'S PROJECT SITES

MESOAMERICA

MEXICO: The CORAL Reef Leadership Network has trained hundreds of tour guides in sustainable marine recreation this year, and CORAL's Environmental Walk-Through program is also well underway in Cozumel. Recipients of a CORAL microgrant have created a summarized, graphical version of the most critical voluntary standards for marine tourism operators to follow. Printed on laminated cards, the standards will be posted on boats and in shops so that they are visible not only to operators, but also to their clients.

BELIZE: Mooring flashcards have been created and distributed to boat operators who use the mooring buoys in Ambergris Caye. The flashcards provide guidelines on how to use the mooring buoys without damaging them or the reefs. CORAL's Belize Field Representative, Valentine Rosado, traveled to Honduras to collaborate with field representative Jenny Myton on developing more user-friendly and customized recommendations for operators who participate in CORAL's Environmental Walk-Through program.

HONDURAS: CORAL is lobbying hard to ensure the inclusion of Cordelia Banks, a coral-rich area with some of the healthiest populations of *Acropora* corals in the Bay Islands, within marine protected area boundaries. Cordelia Banks is located very close to a cruise ship dock, and could become a particularly heavily-visited area if the economy recovers. CORAL plans to provide educational outreach to visitors and operators at the cruise ship dock through the CORAL Reef Leadership Network.

INDO-PACIFIC

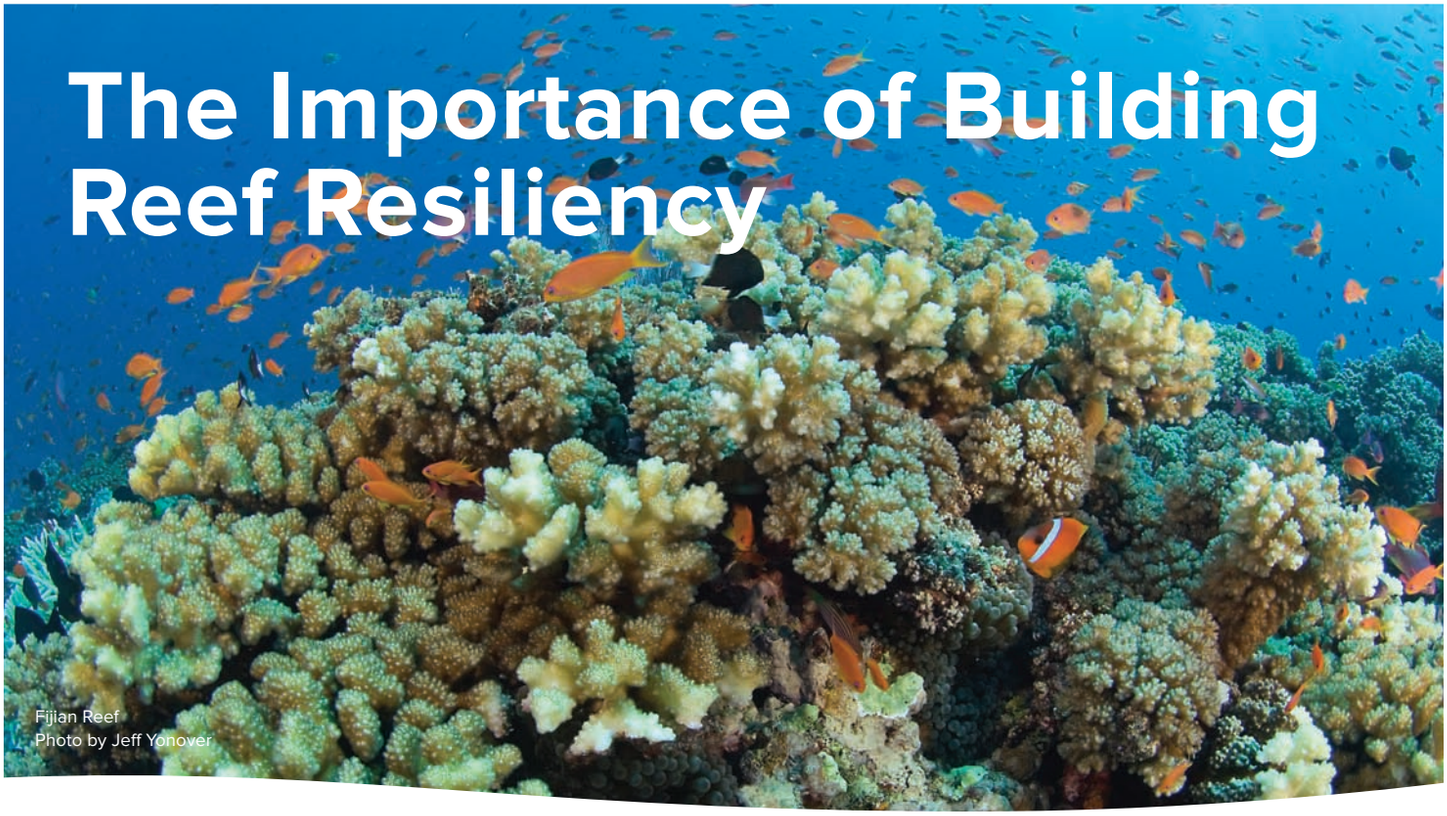
FIJI: CORAL's Fiji team met with the Tui Kubulau—the chief of the Kubulau District—and the Hierarchy Council of Kubulau to discuss the business plan that CORAL helped to create for the Namena Reserve. CORAL was warmly received, and has committed to partner with the people of Kubulau for the next five years to help them adopt the business plan. CORAL and respected elders from Kubulau also met with the Commissioner for the Northern Division, who pledged to support the project.

PAPUA NEW GUINEA (PNG): CORAL Field Representative Jennifer Baing has proposed a traveling cinema that would provide viewers with a basic understanding of coral reefs, marine protected areas, and CORAL. The cinema would include simple DVDs and a projector, which could travel to settlements and facilitate discussions about the importance of healthy reefs. CORAL is also reaching out to youth and women in Riwo village, empowering them to spread the word about conservation.

RAJA AMPAT: During two months of training in Bali, CORAL's field representative in Raja Ampat, Abdul Razak Tamher, worked with field representative Naneng Setiasih to finalize the first draft of new community patrol guidelines—the first for Raja Ampat area—that will be used by rangers at CORAL's partner, the Misool Eco Resort.

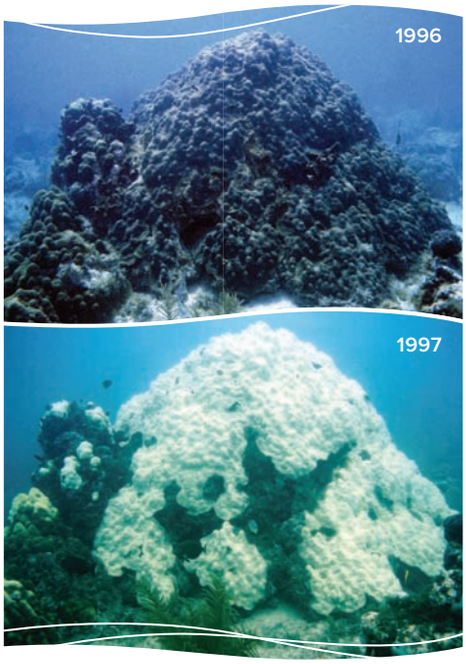
HAWAII: CORAL is helping to re-initiate the Big Island Reef Fund, a group of concerned community members working to promote conservation and sustainable use of marine resources on the island of Hawaii. Spurred by the collaborative development of marine tourism bag tags, this partnership will assist in institutionalizing and sustainably financing ongoing conservation endeavors in West Hawaii.

The Importance of Building Reef Resiliency



Fijian Reef
Photo by Jeff Yonover

Coral reefs are naturally resilient ecosystems, adapted to recover from battering storms that frequently strike the tropical areas where they occur. However, reefs today face many more threats than the occasional hurricane—intensifying global stresses like climate change and ocean acidification are accompanied by increasing local threats from coastal development, destructive fishing practices, careless tourism, and pollution.



This 500-year-old coral colony of *Montastrea faveolata* in the Florida Keys has been monitored since 1993. Healthy coral tissue covered the entire colony in 1996; just one year later, 80% of the colony had bleached. Photos courtesy Reef Relief/Marine Photobank

It has been shown that both local and global stresses can significantly degrade coral reefs. But how do these different pressures interact? Could acclimatization to a stressful environment actually increase corals' ability to withstand future stress? A recent paper published by the Public Library of Science (*PLoS ONE*) provides evidence that such wishful thinking is mistaken.

Rising ocean temperatures can induce coral bleaching, a phenomenon in which corals expel the symbiotic algae that provide an essential portion of their nutrition. Corals may recover their algae and survive if conditions become favorable again, but the stress can reduce their growth rates. Based on studies of coral growth in four locations on the Mesoamerican Reef around a mass-bleaching event in 1998, the conclusion of the recent *PLoS ONE* paper is evident from its title: "Local Stressors Reduce Coral Resilience to Bleaching." The study found that coral growth rates at sites that were relatively free from local stressors recovered in two to three years, while growth rates in sites with higher local stressors remained suppressed for at least eight years.

Studies of coral reefs in locations as diverse as Australia, the Coral Triangle, and Bonaire all present similar results: corals are most able to recover from large-scale threats like rising ocean temperatures, water quality decline, and storm damage when they are healthy to begin with. Building reef resiliency by reducing local stressors is the best strategy we have to help them withstand the global threats that will take longer to curtail and are already taking effect. With data from the National Oceanic and Atmospheric Administration showing record high ocean temperatures this summer, and a new study in the journal *Nature* indicating that the past decade has seen more frequent hurricanes than any time in the past 1,000 years, it is clear that we must act quickly to bolster reef health and build robustness.

Experts from around the world are advocating networks of effectively-managed marine protected areas, coupled with widespread education, poverty alleviation, and alternative livelihood creation, as essential components of a global approach to saving coral reefs—precisely the strategies that CORAL is employing in our work around the world. Although reducing carbon dioxide emissions will be necessary to limit the detrimental impacts of climate change and ocean acidification, the long-term survival of coral reefs depends on our action—now—to alleviate local pressures and support healthy, resilient reef ecosystems.

To read the full paper, log on to **www.plosone.org** and search for "coral resilience."

A New Business Plan for the Roatan Marine Park

The Roatan Marine Park, one of CORAL's partners in Honduras, is getting a major strategic boost thanks to the hard work of Ian Hepworth, a student at the University of California's Haas School of Business. Ian applied to work with CORAL through the Packard Environment Fellows Program, which places MBA students at conservation organizations for summer fellowship positions. Ian spent ten weeks working with CORAL and the Roatan Marine Park to develop a much-needed park business plan.

Though officially designated as a marine protected area (MPA) in the late 1990s, the area now known as the Roatan Marine Park really got its start in 2005, when a group of concerned dive operators and business owners united to protect the reef ecosystem from illegal activities. The group formed alliances with the National Police and purchased boats to patrol the reserve and reduce poaching. The park's mission quickly expanded to include educational programs, a marine waste program, marine infrastructure improvements, and the development of universal standards for diving and boat operations. With this fast growth, it soon became clear that the park needed a strategic plan to prioritize, organize, and finance its work moving forward—it needed a business plan.

The new business plan sets out priorities for the park's future conservation work, developed through Ian's analysis of interviews he conducted during a week of on-site work in Roatan, combined with survey results from local hotels, restaurants, dive operators, and park board members. Ian has also created a financial strategy for funding the work, as well as a marketing plan that includes over forty specific tactics that the marine park can use to promote itself to local businesses, tourists, and the community. These strategies will build both monetary support and community buy-in. Finally, the plan includes a competitive analysis that will help the park to solidify its identity, and an organizational analysis that will improve internal operations.

Special recognition also goes to Whitney Morris, a student at the University of Michigan's Ross School of Business. Though not directly affiliated with CORAL, she decided to spend her summer volunteering with the Roatan Marine Park and made great contributions to the project.

Ian will return to Honduras this fall to present the business plan to the Roatan Marine Park in person. The plan will benefit the marine park directly, but the impact of this project doesn't stop at Roatan. Using Ian's work and his ongoing support, CORAL is designing a guidebook that will provide a framework for business plan development to MPAs anywhere in the world. Improving MPA effectiveness is our best chance to protect coral reefs and other marine ecosystems, and this guidebook will help marine parks worldwide to achieve their conservation goals.

Ian Hepworth and CORAL's Honduras Field Representative, Jenny Myton, at the Roatan Marine Park office
Photo by Ian Drysdale

Photo by Ian Drysdale

Originally from Minnesota, Ian Hepworth came to California to attend Stanford University. After working in health care consulting for a couple of years, Ian decided that he wanted to make more of a positive difference through his work. He chose to attend the Haas School of Business because of its strong focus on social ventures and corporate social responsibility, and plans to pursue work in one of these areas after he graduates with an MBA next year. Ian was excited to work on the Roatan Marine Park business plan because it gave him the opportunity to use both his business knowledge and his Spanish language skills for important conservation work—and, of course, it gave him the chance to dive.

New Faces at CORAL

The past year has seen a number of new staff at CORAL's San Francisco office, including from left to right: Vicky Seid, Malinda Wistrom, Sarah Freiermuth, Kate Trevelyan-Hall, and Candace Leong
Photo by Joanna Solins

Sarah Freiermuth, Assistant Director of Development, began working in ocean conservation in 1995 as an educator at the National Aquarium in Baltimore. She followed this passion to the Birch Aquarium in San Diego, the Monterey Bay Aquarium, and the San Francisco Zoo before joining the team at CORAL. Sarah has a degree in Biology from the University of North Carolina at Chapel Hill, and is a certified scuba diver.

Vicky Seid, Accountant, has focused on accounting for the past ten years, serving organizations such as Community Educational Services of San Francisco and the Trust for Public Land. Prior to her accounting career, she worked in administration and program coordination for a number of Bay Area community-based nonprofits. Vicky graduated from the University of California, Berkeley, with a degree in Bacteriology.

Kate Trevelyan-Hall, Foundation and Grants Associate, joined CORAL in July, bringing with her more than three years of fundraising experience in the non-profit sector. She graduated from Santa Clara University with degrees in Anthropology and Spanish, with a focus on International Relations, and has studied abroad in Spain, France, and Peru. She hopes to become scuba certified by her first anniversary with CORAL.

Candace Leong, Program Associate, graduated from the University of California, Santa Cruz, with a degree in Marine Biology. She became scuba certified for her study-abroad program in Australia, and dove in Fiji, Australia, and Monterey, CA. Since then, she has interned on a deep sea expedition, worked with sea otters, participated in underwater beach clean-ups, and volunteered at CORAL before joining the staff.

Malinda Wistrom, Development Assistant, comes to CORAL from the development department at the Seva Foundation in Berkeley. A lifelong ocean lover, Malinda is a frequent snorkeler and participates in local coastal clean-up events every year. She graduated from the California State University of Sacramento with a degree in Physical Geography, focusing her coursework on natural resources and climatology.

CORAL Reef Leadership Network Spotlight: **Bo Pardau**

Months of hard work by CORAL Reef Leader Bo Pardau have paid off in West Hawaii, where new "Reef Etiquette" signs will educate a multitude of visitors about how to act responsibly around coral reefs. After the resounding success of these signs on Maui, where over thirty have been installed, CORAL issued a microgrant to purchase four signs for Hawaii Island. Bo agreed to take on the task of determining locations for the signs and getting the necessary approvals to install them; as a home designer, he is used to dealing with public agencies.

The four chosen locations for the new signs—Kailua Pier, La'aloa Beach Park, Honaunau Bay, and Alula Bay at Honokohau Harbor—are all popular entry points for snorkelers, divers, and swimmers. Bo took photographs at each site, created a map indicating the desired sign locations, wrote a proposal, and submitted materials to the proper agencies to get permission to install the signs.

Responses for the Kailua Pier and La'aloa Beach Park proposals were rapid and very positive, and Bo has now personally installed both signs. The other two sites had more complicated land rights circumstances, slowing the approval process, but Bo feels confident that success is possible and imminent. He takes inspiration from members of the Puako community to the north, who persevered through a similar situation and succeeded in installing signs.

An avid diver and certified scuba instructor, Bo has been leading manta ray dives twice a week for the past five years. Being involved with CORAL has given him a greater awareness of the impact that education can have. He has seen how popular the signs are, and has realized that most people really care about acting responsibly—they may not know how, but they are eager to learn.

Bo Pardau shows off the new Reef Etiquette sign at La'aloa Beach Park
Photo by Jamie Pardau

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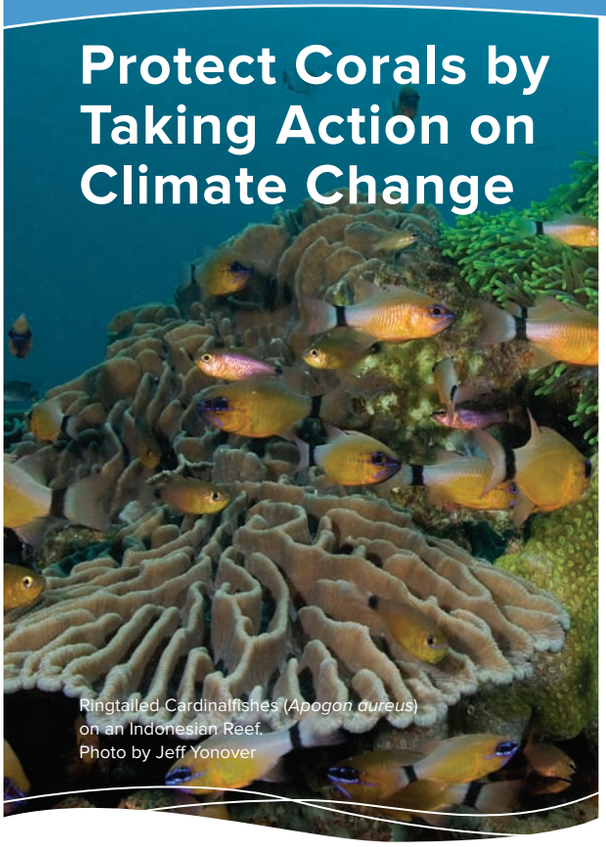
Protect Corals by Taking Action on Climate Change



Ringtailed Cardinalfishes (*Apogon aureus*) on an Indonesian Reef.
Photo by Jeff Yonover

Climate change poses a tremendous threat to coral reefs. Coral organisms are very sensitive to changes in temperature, and warming ocean waters are already causing widespread coral death and damage. The same carbon dioxide emissions that contribute to global climate change are responsible for increasing the acidity of the oceans, making it more difficult for corals and many other marine invertebrates to form shells or skeletons, and thus threatening the very foundation of the marine food web.

This December, government representatives from almost 200 countries will meet in Copenhagen, Denmark, for the United Nations Climate Change Conference (known as COP15) to negotiate a new protocol for addressing climate change and setting greenhouse gas emissions reductions. The Kyoto Protocol, ratified in 1997, set the first binding targets for emissions reductions in industrialized countries, but it will run out in 2012. The aim of COP15 is to negotiate a new global agreement that will come into effect after the Kyoto Protocol expires.

As a world leader and one of the largest emitters of carbon dioxide, the United States can have a huge impact on the results of the COP15 negotiations. It is essential that we set an example by passing strong national climate legislation.

WHAT YOU CAN DO

- Visit www.coral.org/climate_action for more information on climate change and how it affects coral reefs.
- Call or write your elected representatives and tell them to support strong action on emissions reductions.
- Spread the word! Tell your friends to do the same.