



CORAL REEF CONSERVATION 2017 Strategic Action Plan

Coral Reef CPR Corporation
1318 Excaliber Ln
Sandy Spring MD 20860
coralreefcpr@gmail.com

A diver in a blue and white wetsuit is shown underwater, focused on examining a piece of coral. The diver is wearing a black BCD, a watch, and white gloves. The background is a clear blue sea with various coral formations.

SERVATION

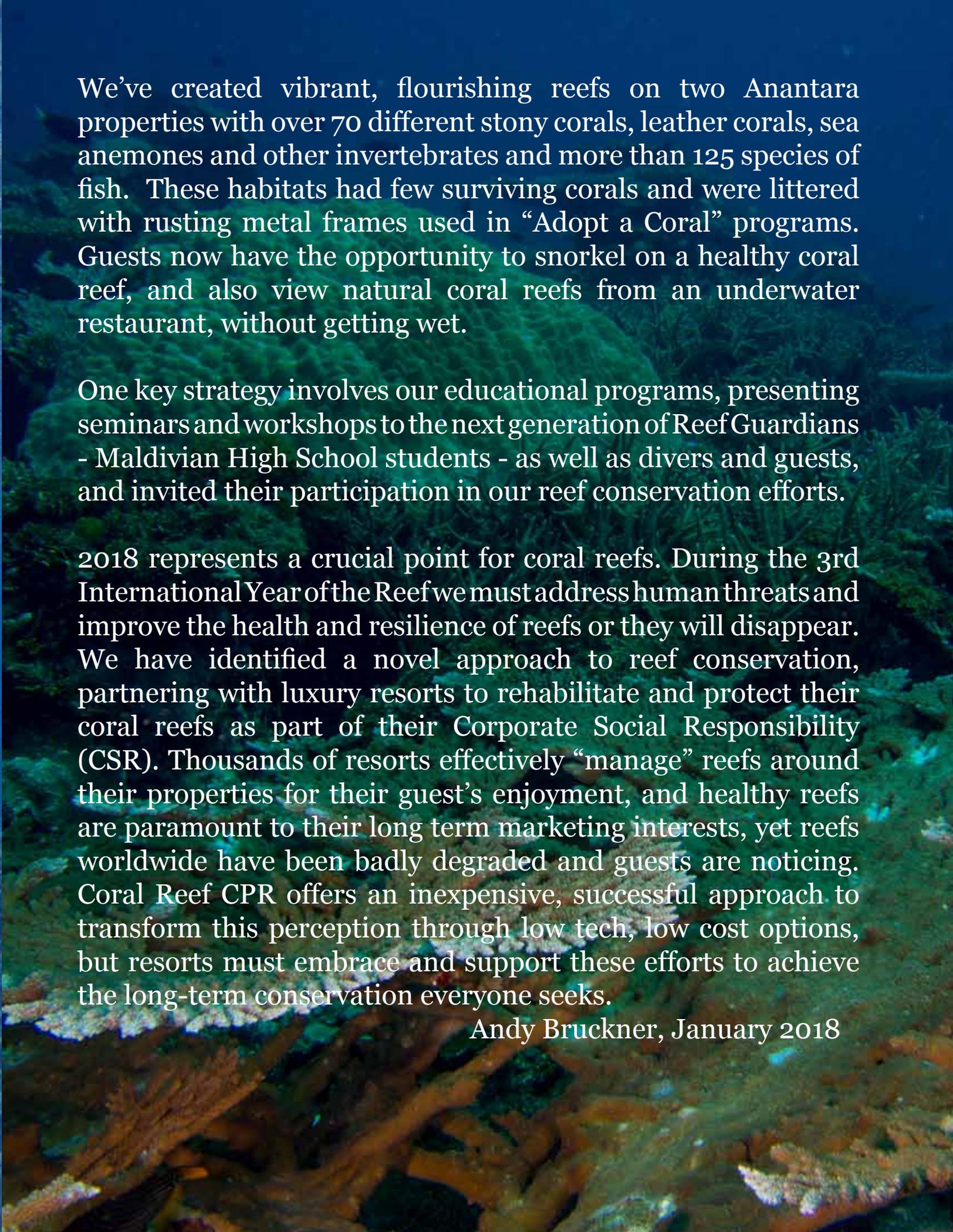
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Letter from the Executive Director

During 2017, Coral Reef CPR advanced our coral reef conservation goals through continued research, education and awareness, and a large-scale coral gardening and restoration effort. We partnered with three resorts in the Maldives on three different atolls, focusing on enhancing the recovery of reefs badly damaged by the 2016 coral bleaching event. We worked to eliminate harmful predators that were killing the few remaining corals that had resisted bleaching. We led *Rescue a Reef* Missions to combat outbreaks of crown of thorns starfish and cushion starfish, and we removed thousands of coral eating snails. We introduced a novel technique to grow corals to the Maldives, and successfully planted over 13,000 corals in ten nurseries on Raa, Baa and South Malé Atoll. Over the year, we've witnessed more than 97% survival of these corals, and the most incredible growth. Many are now ready to outplant onto the reef. We also focused on restoring damaged reefs and building new reef systems.



An underwater photograph of a coral reef. The scene is dimly lit, with a blue-green hue. In the foreground, there are large, brownish, rusted metal frames, likely remnants of old structures. The background shows a dense field of green and yellow corals and other marine life. The overall atmosphere is one of a recovering or being rehabilitated reef.

We've created vibrant, flourishing reefs on two Anantara properties with over 70 different stony corals, leather corals, sea anemones and other invertebrates and more than 125 species of fish. These habitats had few surviving corals and were littered with rusting metal frames used in "Adopt a Coral" programs. Guests now have the opportunity to snorkel on a healthy coral reef, and also view natural coral reefs from an underwater restaurant, without getting wet.

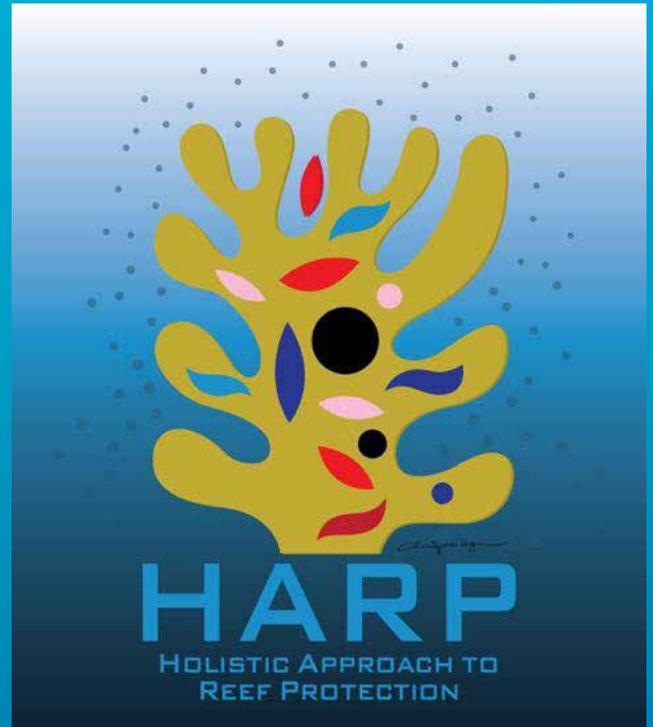
One key strategy involves our educational programs, presenting seminars and workshops to the next generation of Reef Guardians - Maldivian High School students - as well as divers and guests, and invited their participation in our reef conservation efforts.

2018 represents a crucial point for coral reefs. During the 3rd International Year of the Reef we must address human threats and improve the health and resilience of reefs or they will disappear. We have identified a novel approach to reef conservation, partnering with luxury resorts to rehabilitate and protect their coral reefs as part of their Corporate Social Responsibility (CSR). Thousands of resorts effectively "manage" reefs around their properties for their guest's enjoyment, and healthy reefs are paramount to their long term marketing interests, yet reefs worldwide have been badly degraded and guests are noticing. Coral Reef CPR offers an inexpensive, successful approach to transform this perception through low tech, low cost options, but resorts must embrace and support these efforts to achieve the long-term conservation everyone seeks.

Andy Bruckner, January 2018

MISSION

To understand and reduce threats affecting coral reefs, promote sustainable management of reef resources, and rehabilitate degraded reef ecosystems



Through our Holistic Approach to Reef Protection (HARP) we partnered with three resorts in the Maldives to conduct coral gardening, restore degraded reefs, build new reef systems, and educate key stakeholders. We strive to involve guests and volunteers in our efforts and create new citizen scientists that can become Reef Guardians, promoting our efforts worldwide.



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WHERE WE WORK



Aquabar Snorkel Trail



Anantara Dhigu



SEA Restaurant



We worked on three atolls in 2017, Raa, Baa and South Male, completing conservation projects at Anantara Dhigu, Anantara Kihavah and Huruvahli (Carpe Diem). We evaluated bleaching recovery and removed crown of thorns starfish and cushion starfish from Lhaviyani, Ari, Baa, North Male and South Male Atoll (left).



Coral C



In 2017, we planted 13,304 corals in ten nurseries on three atolls. Over the year, we've seen over 97% survival and many corals are now ready to transplant back onto the reef. We have more than 25 species of *Acropora* and seven other genera in our nurseries.



1 year of growth!

Gardening



coral growth over cable tie in 1 week!



CONTROLLING



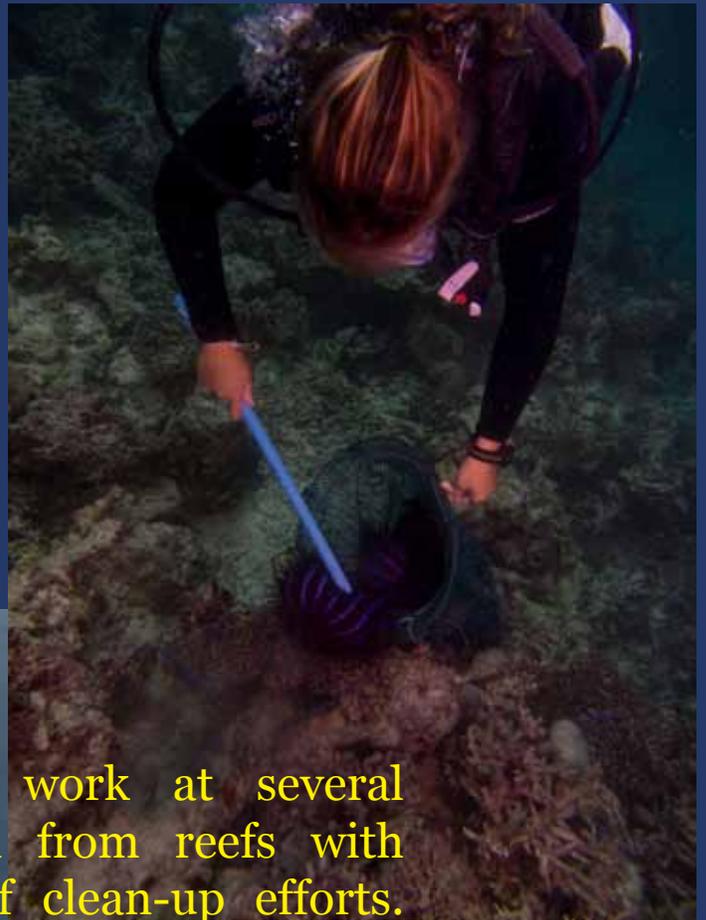
Through three *Rescue a Reef* programs with resorts, we removed 10,601 crown of thorns outbreaks of these coral-eating predators. A total



cushion starfish



...G CORAL PREDATORS



Carpe Diem Maldives pvt. and work at several starfish and 3,638 cushion starfish from reefs with total of 66 volunteers helped our reef clean-up efforts.



3 cm COTS!



BEFORE



RESTORING CO

During 2017, we restored the reef surrounding Anantara Kihavah SEA Restaurant, creating a thriving reef system on the ledge surrounding the restaurant and on reef slope off the west and east side. We transported over 1500 stony corals to the site, some up to 200 kg, as well as dozens of sea anemones, leather corals, soft corals, false corals, sponges and giant clams. All of the corals were rescued from sand mining sites, or had been detached from the reef and were located in sand/rubble channels or were under attack by coral eating snails and starfish. This area now supports 55 species of corals and more than 125 reef fish species.



RAL REEFS



before



A deep channel located off Aquabar, Anantara Dhigu was littered with rusting “adopt a coral” frames and a patch reef that sustained 100% mortality and was being buried by sand. This site was snorkeled by guests routinely, and serves as an important nursery habitat. In 2017, we removed all the metal frames and trash, built a reef framework using dead coral skeletons, and constructed a coral reef with diverse stony corals, soft corals, leather corals, anemones, giant clams and other animals, including large patches of staghorn coral which had disappeared from other sites. Within a week over 1000 fish colonized the reef. The snorkel trail now provides guests with a chance to see a healthy, thriving shallow coral reef

BUILDING A SNO



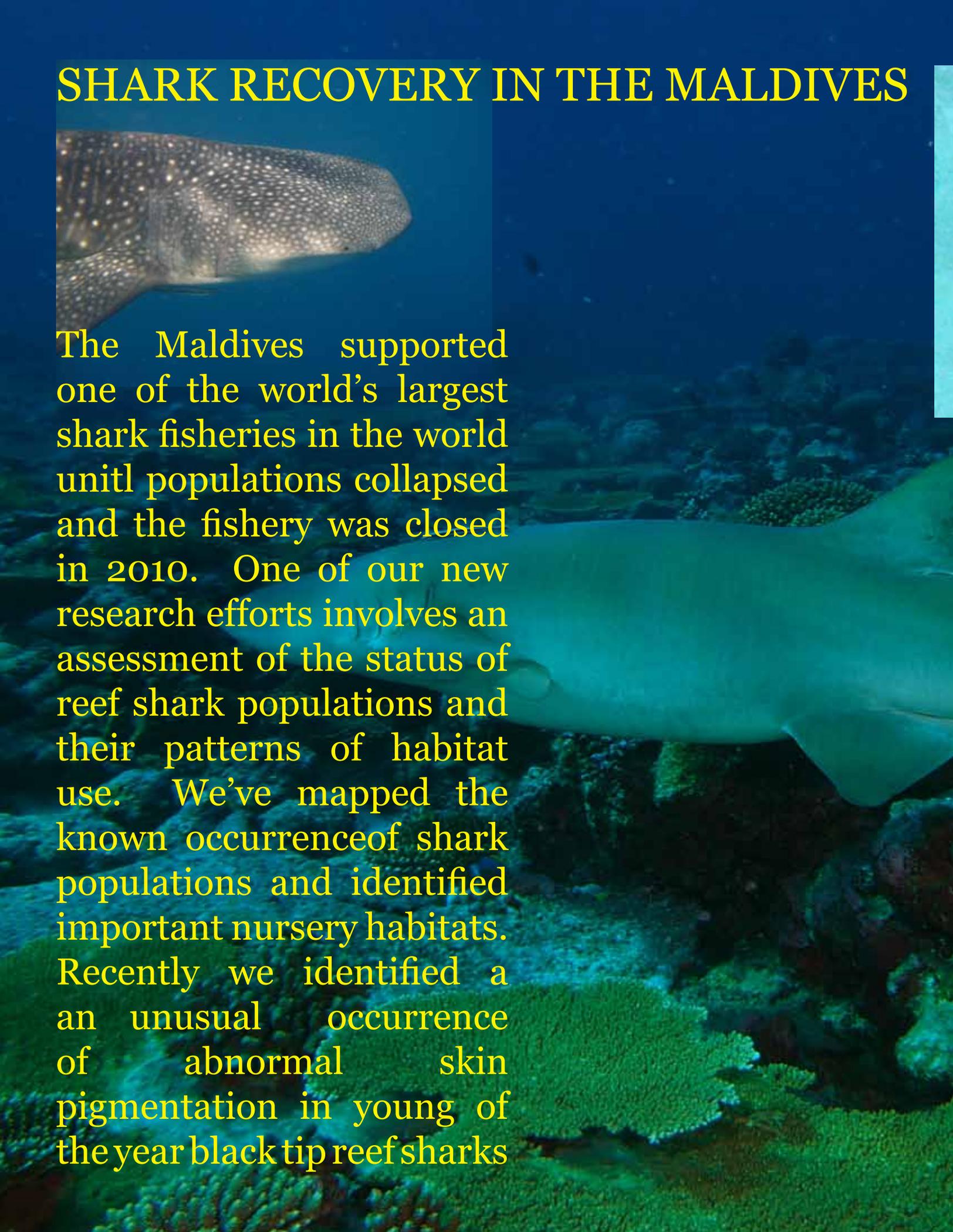
RKEL TRAIL



SHARK RECOVERY IN THE MALDIVES



The Maldives supported one of the world's largest shark fisheries in the world until populations collapsed and the fishery was closed in 2010. One of our new research efforts involves an assessment of the status of reef shark populations and their patterns of habitat use. We've mapped the known occurrence of shark populations and identified important nursery habitats. Recently we identified an unusual occurrence of abnormal skin pigmentation in young of the year black tip reef sharks





abnormal



normal

EDUCATION AND I



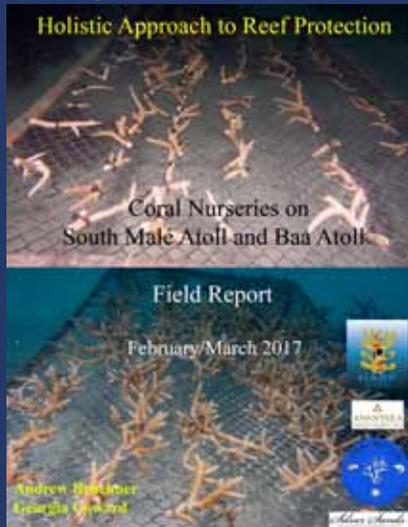
We educated 61 Maldivian High School students and 96 resort guests on coral reefs and involved them in our coral nursery work



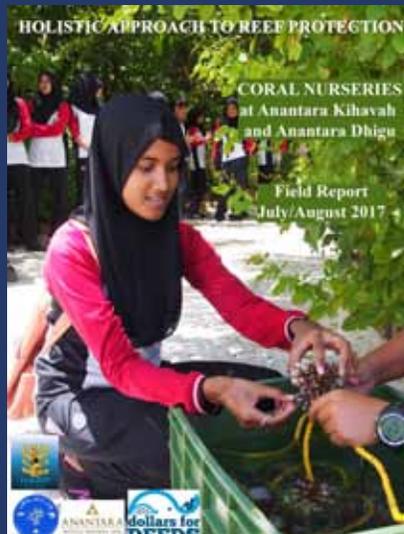
INVOLVEMENT



2017 REPORTS AND PUBLICATIONS



<http://bit.ly/2BihKgJ>



<http://bit.ly/2mY0cCk>



Assessment of Huruvahli, Raa Atoll

HARP Field Reports

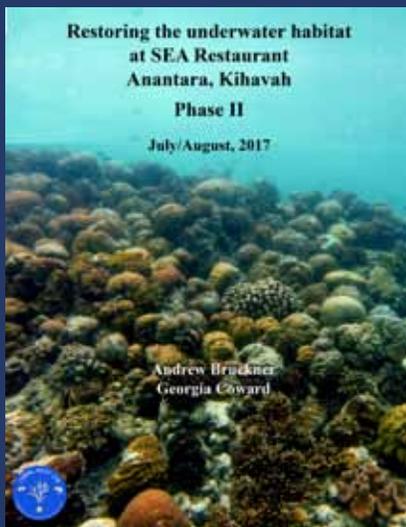


Aquabar Snorkel Trail
<http://bit.ly/2mVYsss>

<http://bit.ly/2mVYsss>



Impact of Coral-Eating Snails
<http://bit.ly/2zTm4Ga>



<http://bit.ly/2DmDpGs>



<http://bit.ly/2DvfUPK>



<http://bit.ly/2Bi04BS>

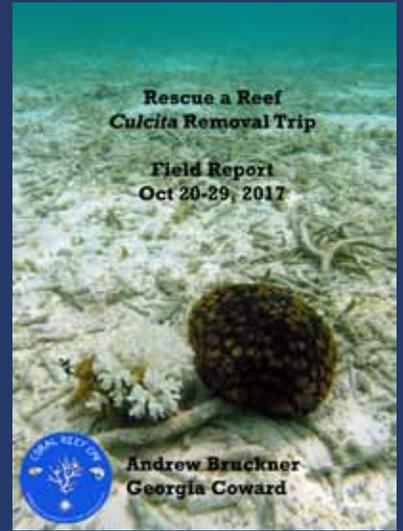
Restoration of undersea habitat around SEA Restaurant



<http://bit.ly/2sNAEJa>



<http://bit.ly/2sNAEJa>



<http://bit.ly/2DnrRmc>

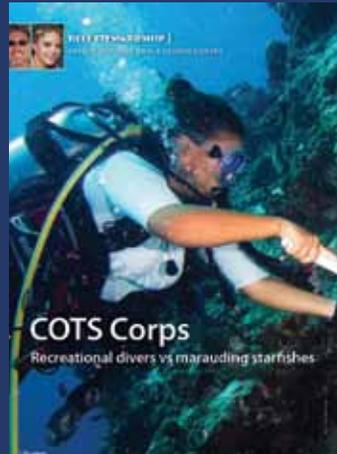
Rescue a Reef Volunteer Dive Trips



<http://bit.ly/2G2Q2Iy>



<http://bit.ly/2fiOr8i>



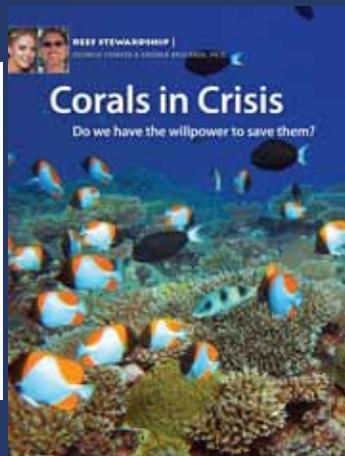
<http://bit.ly/2DvfF7h>



<http://bit.ly/2DyS3xq>



<http://bit.ly/2F15X91>



<http://bit.ly/2z0PBtO>



<http://bit.ly/2rwYP27>

CORAL Articles

Financial Statement
For the fiscal year ending on December 30, 2017

SUPPORT & REVENUE

Individual contributions	1345
Foundation Contributions	2500
Grants	1000
Consultancies	14965
Total Support and Revenue	19810

EXPENSES

Communications	1973
Memberships	216
Salaries and benefits ¹	7000
Insurance	110
Contracts ¹	8000
Travel ²	4810
Administration ³	0
Program costs	0
Total Expenses	22109

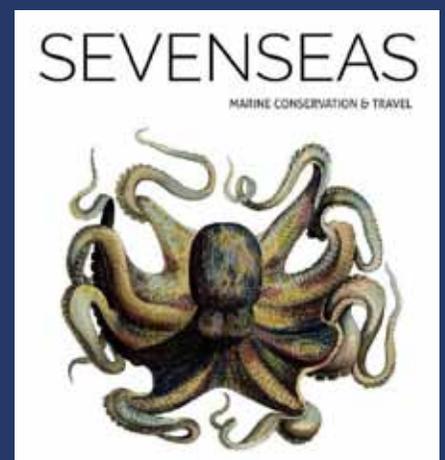
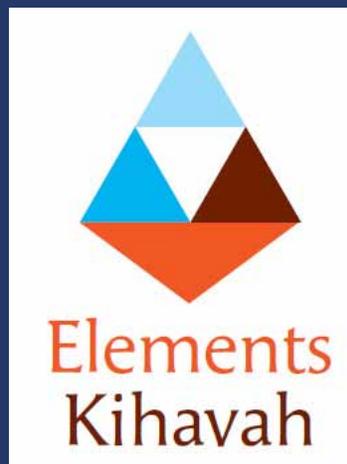
Net revenue	-2299
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¹All of the HARP programs undertaken by Coral Reef CPR were done on a voluntary basis. A single consultancy supported partial salary for on staff member and one contractor.

²Most travel and program costs were supported through in-kind support provided by ANantara Kihavah, Anantara Dhigu, and Carpe Diem

³All administration was completed on a voluntary basis

OUR PARTNERS AND SPONSORS



CORAL