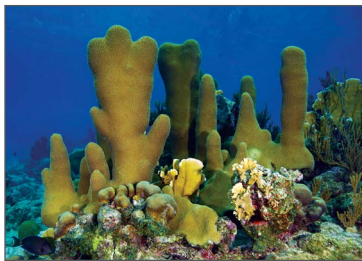


Saving the world's **SUPER REEFS**

A powerful alliance to help coral reefs survive in a warming ocean



Alex Chequer, BIOS, ©Woods Hole Oceanographic Institution



Pat Lohmann, ©Woods Hole Oceanographic Institution

Coral reefs occupy just 1 percent of the Earth's surface, but they host more than 25 percent of all marine species and support the lives and livelihoods of nearly one billion people through food, cultural practices and income from fishing and tourism. Because healthy reefs can absorb up to 97 percent of wave energy, they also serve as living breakwaters, protecting tens of thousands of kilometers of coastline and infrastructure from flooding and erosion.

Despite the many benefits they provide for people and nature, coral reefs face an uncertain future. Human impacts—such as pollution and destructive fishing practices—are weakening coral health, while climate change has already killed thousands of square kilometers of reef. As ocean temperatures continue to rise, coral reef extinction within our lifetimes has become a distinct possibility.

HOPE FOR THE FUTURE

But there is hope. Scientists know that some coral reefs are better able to survive climate impacts and can provide benefits to other reefs. These newly discovered resilient “**Super Reefs**” can survive in a warming ocean, either because they have adapted to higher temperatures or because they live in areas that are sheltered from the heat. As long as they are protected from human threats, Super Reefs can spawn new generations of resilient corals.

Ensuring the future of coral reefs starts with identifying Super Reefs and then protecting them from threats, such as overfishing and destructive fishing techniques, pollution, and coastal development. We know that resilient corals and coral reefs are important to protect in marine protected areas (MPAs) and through restoration projects, but until now the ability to identify and protect resilient coral reefs has been lacking. For the first time, global experts in coral reef research, conservation, and restoration are uniting to identify and safeguard resilient reefs and bring these approaches to coral reef nations, conservation groups, and coastal communities around the world.



OUR PROCESS: PREDICT, PROVE, PROTECT

With state-of-the-art tools and technologies—such as autonomous underwater vehicles, hydrodynamic modeling, and genomic analysis—our team is identifying Super Reefs across the tropics and uncovering their secrets. Our strategy is to find coral reefs that will survive climate change, protect them within MPAs, and work with local communities to breed Super Reef coral larvae and place young corals on reefs to strengthen and restore damaged areas. Together, we will:



DEVELOP

3D hydrodynamic models to identify potential Super Reef locations and deploy divers and autonomous vehicles to verify reefs in those locations



CONDUCT

bleaching, heat-stress, and genomics testing with local scientists and partners to confirm corals' heat tolerance



ASSESS

larval connectivity between Super Reefs and neighboring locations to assess the potential for Super Reef larvae to help heat-damaged reefs recover



SYNTHESIZE

this data into detailed maps of climate-resilient reef locations, including current and projected climate impacts



PRIORITIZE

protection of Super Reefs in collaboration with governments and communities into existing and planned MPAs



SUPPLY

community-run nurseries with Super Reef corals to restore degraded reef habitats

OUR TEAM

Our Super Reefs team brings together experts in ocean science, conservation and management from Woods Hole Oceanographic Institution, Stanford University and The Nature Conservancy to support governments and communities at this critical moment in the history of coral reefs. Our mission is to identify, protect, and grow a global network of Super Reefs to secure the future of coral reefs and the marine life and human communities that they support.

JOIN US

Coral reefs are not doomed, but we must do more than just hope. The discovery and protection of Super Reefs—and the new technologies that allow us to detect them—offer a lifeline for coral reefs that was not available even five years ago. We need to act now to protect these extraordinary ecosystems before the coral crisis hits a point of no return. With your support, we can help ensure that coral reefs not only survive today's threats but thrive for generations to come.

 **LEARN MORE AT**
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