



NOAA Strategy for Stony Coral Tissue Loss Disease Response and Prevention

The NOAA Stony Coral Tissue Loss Disease (SCTLD) Strategy aims to:

- Expand our capacity to respond to the disease outbreak in the Atlantic-Caribbean region;
- Support timely, efficient, and effective action to slow the outbreak by unifying regional efforts under a NOAA response framework that is national in scope;
- Prevent and prepare for the potential spread of SCTLD to the Indo-Pacific region.

Demonstrated Leadership and Partnership in SCTLD Response

The SCTLD epidemic is unprecedented in scale, duration, and rate of associated mortality for susceptible coral species, which includes nearly half of the stony coral species found on Florida's Coral Reef and at least one third of species observed throughout the Caribbean. Since 2016, NOAA, the Florida Department of Environmental Protection, the Florida Fish and Wildlife Conservation Commission, and the National Park Service have been leading a multisector response of over 60 federal, state and local government agencies, private industry, academic and research institutions, conservation organizations, and concerned citizens. As SCTLD continues to spread along Florida's Coral Reef and throughout the greater Caribbean region, NOAA is engaged in the following:

Leadership

- Co-leading response efforts in Florida and the U.S. Virgin Islands for priority areas from research to intervention;
- Leading Florida's Research team to address priority gaps in our understanding of the disease;
- Co-leading Florida's Rescue and Propagation teams to support future restoration efforts;
- Co-leading Florida's Regulatory Review team working to permit response activities & integrate recommendations to reduce spread in construction projects;
- Co-leading the Caribbean Cooperation Team that works to track the spread of SCTLD and build regional capacity for detection and response;
- Leading, funding, and implementing coral restoration efforts from the Caribbean to the Pacific;



Are Indo-Pacific corals susceptible to SCTLD?

While coral assemblages differ between Atlantic and Pacific reefs, some Pacific coral species bear genetic similarities to those that are highly susceptible to SCTLD in Florida and the Caribbean, warranting study of possibility for transmission and precautionary monitoring. Left: Star coral with SCTLD (Caribbean/Florida). Credit: Dr. Andy Bruckner

Research

- Pioneering direct application of antibiotic treatments to fragments of endangered pillar coral;
- Building capacity for disease research, outreach, & surveillance through participation in the multi-sector Coral Disease and Health Consortium;
- Using 'omics technologies to study SCTLD pathology, coral resilience and resistance to disease;
- Partnering with other agencies to research the potential link between ballast water discharge & SCTLD spread
- Integrating the documentation of SCTLD into the National Coral Reef Monitoring Program;

Coordination & Partnerships

- Funding SCTLD response coordinators in Florida, the U.S. Virgin Islands, and Puerto Rico to provide critical capacity for local response efforts;
- Partnering with other agencies and the Association of Zoos & Aquariums to execute the Florida Coral Rescue plan;
- Coordinating restoration efforts in Florida Keys National Marine Sanctuary with the Florida disease response;
- Building capacity for community engagement in restoration and treatment through innovative partnerships; and
- Collaborating with Florida Sea Grant to establish a national response coordinator.



A U.S. VI-FL SCTLD learning exchange to build capacity for SCTLD response. (Credit: Karen Neely/INSU).

SCTLD Strategy Goals

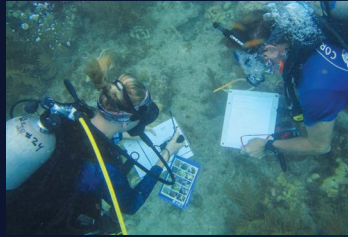
RESEARCH



Credit: NOAA ADML

- Expand Research

RESPOND



Credit: Scot Frew NOAA

- Build Response Capacity
- Support Coral Rescue

ENGAGE



Credit: LT Laura Rock NOAA

- Promote Awareness
- Collaborate with Coral Reef Managers
- Engage Regional Fisheries Managers
- Advance International Partnerships
- Prevent Spread to the Pacific

NOAA's SCTLD Strategy aligns with:

NOAA's Coral Reef Conservation Program Strategic Plan (2018)
NOAA's Coral Disease and Health Consortium response framework (2008)
NOAA's Proposed Action Plan on Coral Interventions (2019)
Gulf and Caribbean Fisheries Institute Stony Coral Tissue Loss Disease Template Monitoring and Response Action Plan (2019)
Florida Department of Environmental Protection Coral Disease Intervention Action Plan (2018)
U.S. Virgin Islands SCTLD Response Plan (2020)
Puerto Rico Department of Natural and Environmental Resources Draft SCTLD Response Plan (2020)

U.S. Regional Biosecurity Plan for Micronesia and Hawaii (Vol. III) (2014)
Crowdsourcing and Citizen Science Act (15 USC 3724) (2016)
NOAA Artificial Intelligence, 'Omics, and Unmanned Systems Strategies (2020)
Joint Statement from the President of the United States and the Presidents of the Freely Associated States (2019)
Great American Outdoors Act, Preserving and Protecting our National Parks (2020)

An Agency-Wide SCTLD Strategy

Bold action is required to maintain U.S. coral reef ecosystems, preserve genetic diversity for future restoration, and prevent further spread of SCTLD. Restoration of priority coral species and mitigation of stress from environmental changes and human impacts will be critical to supporting healthy reefs around the world. NOAA is developing an Implementation Plan that outlines a detailed course of action for SCTLD response and prevention and integrates new technologies. By matching agency capacity with SCTLD response needs, and complimenting efforts of our partners, NOAA will expand upon Strategy goals and agency priorities that support ocean health as well as resilient coastal ecosystems, communities and economies.



The Coral Rescue Team works to collect and maintain coral from Florida's coral reef in housing facilities on land. Scientists collect corals outside the disease zone to preserve genetic biodiversity for restoration.

Credit: Jennifer Moore/NOAA. Right: Rescued coral underwater in a holding tank. Credit: FWC.