

Caribbean-Centered Collaborations in Response to Stony Coral Tissue Loss Disease in 2021

Colaboraciones Enfocadas Hacia el Caribe en Respuesta a la Enfermedad de Pérdida de Tejido de Coral Duro en 2021

Collaborations axées sur les Caraïbes en réponse à la maladie corallienne liée à la perte de tissus durs en 2021

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EXTENDED ABSTRACT

First identified in Florida in 2014, Stony Coral Tissue Loss Disease (SCTLD) has since spread to 19 additional countries/ territories throughout the Wider Caribbean Region (Roth et al., 2020) for a total of 20 infected countries/territories. SCTLD can cause 100% mortality in susceptible species of reef-building stony corals within weeks to months (e.g. Estrada-Saldívar et al., 2020), which may result in devastating impacts to coral reef ecosystems and the economies dependent on them. With stakeholder engagement identified as critical to the successful management of natural resources (e.g. Giakoumi et al., 2018), and the possibility of a disconnect between scientific research and its application by policy makers, natural resource managers and field practitioners (e.g. Gibbons et al., 2008; Merkle et al., 2019), it has been important to provide capacity building opportunities and updates on the latest scientific findings, support the sharing of experiences throughout the region and develop resource materials to ensure that stakeholders are provided with resources to address the threat of SCTLD in their territorial waters and minimize its spread throughout the region.

Since 2018 MPACConnect, the National Oceanic and Atmospheric Administration's Coral Reef Conservation Program (NOAA CRCP) and the Atlantic and Gulf Rapid Reef Assessment Program (AGRRA) have worked assiduously to build the capacity of regional stakeholders who are either actively responding to SCTLD in their waters or preparing for its possible detection. Since 2020 their capacity building efforts have included the:

Hosting of Monthly Status-update Meetings

Florida's SCTLD Response Caribbean Cooperation Team (CCT), which is co-hosted by NOAA CRCP and AGRRA, holds alternate bi-monthly meetings for 17 regional organizations working to address SCTLD, and for over 160 regional managers and other practitioners that represent over 30 countries and territories within the Wider Caribbean Region. These meetings have helped to bring coral reef managers and related partners from throughout the Wider Caribbean Region together in an environment in which best practices and experiences are shared and relationships can be developed with colleagues. In 2021, the CCT initiated a WhatsApp SCTLD Action Group that is expediting information sharing among the environmentalists, recreational industry divers and researchers who are engaged in SCTLD-related field activities.

Facilitation of Online Training on Issues Associated with SCTLD

MPACConnect with NOAA CRCP, AGRRA and other expert partners have coordinated a series of online training sessions about SCTLD [identification](#), [monitoring](#), [treatment and intervention](#) planning. Researchers, natural resource managers and field practitioners were invited to present on the latest scientific findings and to share experiences treating affected corals, monitoring susceptible reef sites and engaging with local communities. The training sessions have been participatory and the over 100 attendees at each training session were encouraged to ask questions, contribute to discussions, answer polls, join collaborative live online workspaces and share their own experiences in order to foster relationships, help increase knowledge about SCTLD and the effectiveness of monitoring, treatment and other intervention protocols.

Development of SCTLD Resource Materials

MPACConnect and AGRRA, with the close involvement of NOAA CRCP, have developed a wide range of resource materials to help Caribbean coral reef managers and field practitioners respond to SCTLD. These include:

[upgrades to web-based data tools](#), e.g., [the SCTLD dashboard](#);

[survey data sheets](#);

[planning tools for SCTLD monitoring and response](#);

[outreach materials](#) on SCTLD detection which built on earlier outreach materials on SCTLD mitigation initiatives;

fact sheets on [monitoring](#) and the [use of antibiotics to treat SCTLD](#); and

instructional videos on SCTLD [prevention](#), [surveillance](#) and [treatment](#).

These various resources have provided outreach materials that can be shared with local and regional stakeholders to

support local training on monitoring and treatment of SCTLD. The knowledge shared via resource platforms hosted by MPACConnect/ Gulf and Caribbean Fisheries Institute (GCFI) and AGRRA have also provided important updates on the spread of SCTLD throughout the Wider Caribbean Region and its impact on coral species. For example, with over 1000 coral monitoring surveys entered into the SCTLD database, the [Online SCTLD Data Platform and Tracking Map](#) has become a useful tool for both Caribbean and Florida partners and has significantly aided in tracking the progression of the disease. The resource materials created by MPACConnect/GCFI and AGRRA may be found on GCFI's [webpage on SCTLD](#) and under the [resources](#) section on AGRRA's website, respectively.

Provision of Small Grant Support

Five grants were awarded under the MPACConnect small grants program to support the development and implementation of SCTLD monitoring, intervention and action plans in Belize, Honduras, Mexico and Grenada. This allowed local organizations to develop monitoring and intervention action plans and monitor susceptible reefs in areas either already affected, or that could become affected, with SCTLD.

Liaising with Regional and International Partners

Collaborations have been fostered with SCTLD experts in Florida, Ocean Alchemists, the Association of Zoos and Aquariums, The Nature Conservancy, the Virgin Islands Coral Reef Advisory Group and other partners to support capacity building, treatment and rescue planning. Ongoing outreach initiatives by MPACConnect, NOAA CRCP and AGRRA with Ocean Alchemists has helped to ensure that effective treatment materials have reached practitioners coordinating official intervention programs.

Since there is often a disconnect between researchers and natural resource managers (e.g. Gibbons et al., 2008; Merkle et al., 2019), the development of materials that translate scientific research into easily understood materials is critical to help managers incorporate the most-up-to-date science into their management decisions. As research continues into the causes of, and responses to, SCTLD it is imperative that natural resource managers, policy makers and field practitioners receive this information in a timely, easily understood manner so that it can be disseminated to stakeholders, incorporated into management plans and used to inform intervention practices in the field. The Caribbean-centered collaborations achieved by MPACConnect, NOAA and AGRRA with a network of Caribbean coral reef managers and other partners have helped to achieve the wide dissemination of best practices and sharing of experiences.

By connecting regional managers and experts, providing a platform for sharing among countries, and encouraging the involvement of multiple actors from within countries affected by, and susceptible to, SCTLD, our Caribbean-centered collaborations have put into practice the findings of Gibbons et al. (2008) who found that close working relationships between researchers and policy-makers could, among other initiatives, be fostered through the active dissemination of information and maintenance of

effective opportunities for communication. The capacity building initiatives and the easily understood and accessible resource materials developed by MPACConnect, NOAA CRCP and AGRRA help to bridge the gap between researchers and local stakeholders by providing up-to-date information for tracking the progression of the disease through the Wider Caribbean Region, identifying susceptible coral species and their presence within national/territorial waters, developing suitable management, monitoring and intervention action plans, and sharing experiences with researchers, colleagues and local stakeholders. As SCTLD continues to spread throughout the Wider Caribbean Region it is critical that as many stakeholders as possible are aware of current monitoring and treatment protocols and it is hoped that the provision of these materials will enable policy-makers and natural resource managers to make informed decisions on how to address SCTLD within their territorial waters.

KEYWORDS: Stony coral tissue loss disease, capacity building

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