



Open Letter of Support for Stony Coral Tissue Loss Disease Response Efforts from the Governments of Puerto Rico and the U.S. Virgin Islands

In recognition of the devastating impacts of coral disease to coral reefs that are ecologically, economically, and culturally critical to the U.S. Caribbean, the Governments of Puerto Rico and the U.S. Virgin Islands jointly commit to sustaining and enhancing disease response efforts at the jurisdictional, regional, and national level.

Coral reefs cover less than 1% of the Earth's surface¹ and yet are one of the most essential and biodiverse ecosystems on the planet, providing habitat to 25% of the world's marine life.² They are also incredibly important to the economy, generating an estimated \$1.04 billion annually in the United States, supporting tourism, fisheries, and recreation industries, among others.³ Coral reefs also provide critical coastal protection for coastal communities by absorbing up to 97% of wave energy⁴ and protecting against approximately \$1.8 billion annually in storm damage across the nation.⁵

In the U.S. Caribbean, coral reefs are of great environmental, sociocultural, and economic value. In Puerto Rico, coral reefs cover 5,000 km² of the coastal zone and have been designated as essential structures for coastal protection under Law No.72-2020. The coastal protection they provide, especially during storm surges, averts approximately \$184 million in damages each year.⁵ In the U.S. Virgin Islands (USVI), coral reefs generate an estimated \$187 million annually, with a gross domestic product per person of more than \$40,000 in terms of hazardous risk.⁵ Protecting coral reefs is essential for the future of marine biodiversity, coastal communities, and thriving economies in the U.S. Caribbean.

Unfortunately, these invaluable ecosystems are under threat. A novel coral disease has been spreading rapidly throughout the Atlantic and Caribbean, unprecedented in terms of its geographic pervasiveness, high levels of mortality, species susceptibility, and persistence in the marine environment. Stony coral tissue loss disease (SCTLD) was first detected off of Florida's coast in 2014. Five years later, it began devastating coral reefs in the USVI and Puerto Rico. In just three short years, coral cover in the U.S. Caribbean has declined by about half, compounding the negative impacts associated with decades-long

¹ Birkeland, C. (2015). Coral reefs in the anthropocene. *Coral Reefs in the Anthropocene*

² McAllister, D. 1995. "Status of the World Ocean and Its Biodiversity." *Sea Wind* 9: 1-72.

³ Brander, L. M., Van Beukering, P. (2013). *The Total Economic Value of U.S. Coral Reefs: A Review of the Literature*. NOAA Coral Reef Conservation Program, Silver Spring, MD. 32 p.

⁴ Ferrario, F., Beck, M.W., Storlazzi, C.D., Micheli, F., Shepard, C.C., and Airoldi, L., 2014, The effectiveness of coral reefs for coastal hazard risk reduction and adaptation: *Nature Communications*, v. 5, 9 p

⁵ Storlazzi, C. D., Reguero, B. G., Cole, A. D., Lowe, E., Shope, J. B., Gibbs, A. E., ... & Beck, M. W. (2019). Rigorously valuing the role of US coral reefs in coastal hazard risk reduction (No. 2019-1027). US Geological Survey.

coral losses associated with coral bleaching, marine debris, ocean acidification, and overuse.^{6,7,8} Experts believe that SCTLD may be the most lethal coral disease ever recorded.⁹

In response to this devastating loss of marine life and the future threat posed by the persistence of SCTLD, both the USVI and Puerto Rico have developed innovative, effective disease response efforts. The USVI Department of Planning and Natural Resources has hired a centralized Disease Coordinator to lead the newly established Virgin Islands Coral Disease Advisory Committee. This committee is composed of resource managers, researchers, non-profits, and other community groups and works collaboratively to address the holistic management of this emergency response effort. The Puerto Rico Department of Natural and Environmental Resources is spearheading intervention and research efforts guided by the island's SCTLD Emergency Response Strategic Plan. This plan was created by the Department as mandated by Governor Pedro Pierluisi's Executive Order (EO-2021-066), which declared a State of Emergency in Puerto Rico's coral reefs due to this disease. This Strategic Plan delineates island wide efforts and strategies to recruit volunteers that adopt nearby reefs to help identify areas where SCTLD has arrived, collect data that helps understand ambient conditions, and treat corals.

In recognition of the importance of our coral reefs and the tremendous threat posed by the continued spread of this disease, we jointly commit to the following:

- **Sustain and increase support at the jurisdictional level for critical disease response and coral restoration and recovery efforts.** In Puerto Rico, the Governor has offered unprecedented support for disease response, declaring SCTLD to be an ecological emergency and allocating \$1 million to develop innovative programs and partnerships. Additionally, the Puerto Rico Government is committed to supporting long-term coral rescue and restoration efforts. In the USVI, a long-term coral restoration planning effort is considering the ongoing effects of disease in an attempt to increase the chances of long-term ecological recovery and will be used to leverage additional resources to be dedicated to the adaptive management of coral reef resources. We recognize the importance of sustaining and expanding these programs to the success of future efforts to combat this deadly disease and commit to continued support for SCTLD response at the jurisdictional level.
- **Enhance regional collaboration between Puerto Rico and the U.S. Virgin Islands.** We recognize that our shared challenges warrant joint solutions and that by working together, we will be more effective than if we were to work in isolation. Recently, the jurisdictions met to identify opportunities for regional partnerships that leverage our unique skills and resources. We commit to working jointly to increase awareness about the threat posed by this disease, pursue research focused on understanding disease origin and how SCTLD is impacting reefs over the long term, and advancing groundbreaking developments in the fields of disease intervention and coral

⁶ VI-CDAC. PROGRESSION OF SCTLD IN THE USVI AND BVI. 10/5/2021

⁷ Brandt ME, Ennis RS, Meiling SS, Townsend J, Cobleigh K, Glahn A, Quetel J, Brandtneris V, Henderson LM and Smith TB (2021) The Emergence and Initial Impact of Stony Coral Tissue Loss Disease (SCTLD) in the United States Virgin Islands. *Front. Mar. Sci.* 8:715329.

⁸ DRNA. (2021). Distribution map of SCTLD in Puerto Rico.

⁹ Estrada-Saldívar N, Quiroga-García BA, Pérez-Cervantes E, Rivera-Garibay OO and Alvarez-Filip L (2021) Effects of the Stony Coral Tissue Loss Disease Outbreak on Coral Communities and the Benthic Composition of Cozumel Reefs. *Front. Mar. Sci.* 8:632777.

rescue and restoration. To this end, the jurisdictions commit to meeting on an annual basis to review progress and success of joint efforts and identify critical next steps to achieve progress on collaborative initiatives.

- **Support the execution of the *NOAA Strategy for Stony Coral Tissue Loss Disease: An Implementation Plan for Response and Prevention*.** If fully enacted, this plan will provide national-level coordination and significant resources for coral disease research, prevention, and response efforts. It will directly support coral monitoring, treatment, rescue, and restoration efforts within the U.S. Caribbean, complimenting and enhancing jurisdictional capacity to respond effectively to the disease outbreak.

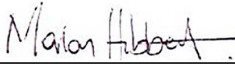
Additional resources are needed to continue and expand these efforts to protect the long-term sustainability and economic viability of our reefs. Sustained long-term partnerships among jurisdictions will continue to foster innovative, groundbreaking, and necessary solutions that will help build and sustain more resilient Caribbean-wide coral reefs.



Jean-Pierre L. Oriol, Commissioner, USVI Dept. of Planning and Natural Resources



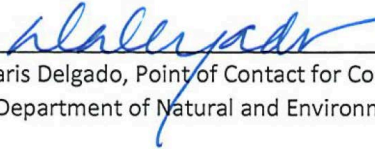
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