

Annotated bibliography for coral and live/hard bottom compiled and summarized by The Pew Charitable Trusts

Bostrom-Einarsson L, Babcock RC, Bayraktarov E, et al. Coral restoration - A systematic review of current methods, successes, failures and future directions. *PLoS ONE*. 2020;(1). Retrieved from <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0226631>

- This study is a global review of coral restoration methods and includes 15+ from Southern Florida. Overall, the study finds that most restoration projects are short term and focus on fast-growing branching coral. The study suggests that coral restoration projects targeted at reef recovery should have the re-establishment of breeding populations as a fundamental aim.

Dupont J. Artificial Reefs as Restoration Tools: A Case Study on the West Florida Shelf. *Coastal Management*. 2008;36(5):495-507. Retrieved from <https://www.tandfonline.com/doi/abs/10.1080/08920750802395558>

- This study includes a detailed overview of one mitigation/restoration project that constructed two artificial reefs on the central West Florida Shelf in the eastern Gulf of Mexico. The study suggests that coastal managers should execute mitigation and restoration projects that fits their specific area's environmental, economic, and social needs as well as the available resources. Artificial reefs should not be expected to fare better than natural reefs in areas exposed to chronic harmful conditions.

Lam VY, Doropoulos C, Mumby PJ. The influence of resilience-based management on coral reef monitoring: A systematic review. *PLoS One*. 2017;12(2):e0172064. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5302802/>

- This study investigates whether the introduction resilience-based management (RBM) has translated into an explicit change in the metrics surveyed and how it differs from earlier management approaches. The study provides suggestions for incentivizing data collection in reef monitoring and linking the results to management actions.

Lirman D, Fong P. Is proximity to land-based sources of coral stressors an appropriate measure of risk to coral reefs? An example from the Florida Reef Tract. *Marine Pollution Bulletin*. 2007; 54:779–791. Retrieved from <https://www.sciencedirect.com/science/article/abs/pii/S0025326X07000082>

- This study compares inshore and offshore coral populations to see if land-based sources of disturbance (such as human activity) can be used as a proxy for predicting the vulnerability and future status of reef resources. This study suggests that proximity to potential sources of stressors may not always be an adequate proxy for assigning potential risks to reef health, and that nearshore habitats can support keystone reef resources and may be highly resilient to disturbance. This has important implications for the protection of reef resources and the establishment of Marine Protected Areas.

Mumby PJ, Steneck RS. Coral reef management and conservation in light of rapidly evolving ecological paradigms. *Trends in Ecology and Evolution*. 2008; 23(10):555-563. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0169534708002504>

- This report provides guidelines and recommendations to facilitate a rapid response from the time an injury to coral reef resources is reported to the success of response and restoration efforts. The report focuses on southeast Florida reefs.

Schittone J. Restoration and monitoring of a vessel grounding on a shallow reef in the Florida Keys. *Rev Biol Trop*. 2010;58 Suppl 3:151-161. Retrieved from <https://pubmed.ncbi.nlm.nih.gov/21299102/>

- Describes restoration efforts taken by NOAA for a reef faced with hurricanes and vessel-inflicted damage. The study raises widely applicable questions such as can greater coral density be attributed to restoration efforts, and do *Porites* larvae exhibit an active settlement preference for limestone rock substrate.

Staley C, Kaiser T, Gidley ML, et al. Differential Impacts of Land-Based Sources of Pollution on the Microbiota of Southeast Florida Coral Reefs. *Applied and Environmental Microbiology*. 2017; 83 (10) e03378-16. Retrieved from <https://aem.asm.org/content/83/10/e03378-16.short>

- This study characterizes the microbial communities from land-based sources of pollution (LBSP) (coastal inlets, oceanic outfalls from wastewater treatment plants, and wastewater treatment effluent), coral reef waters, and coral tissues (mucus and polyps) among coral reefs off the southeastern coast of Florida. The results of this study provide insights into how microbial communities from LBSP should be considered in coral reef management.

Ware M, Garfield EN, Nedimyer K, et al. Survivorship and growth in staghorn coral (*Acropora cervicornis*) outplanting projects in the Florida Keys National Marine Sanctuary. *PLoS ONE*. 2020;(5). Retrieved from <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0231817>

- This article reports the results of staghorn coral (*A. cervicornis*) population restoration in 20 coral outplanting projects in the Florida Keys first evaluated by the Coral Restoration Foundation™ in 2007. The restoration projects were evaluated with the NOAA Recovery Plan (NRP) that aims for population viability through increased population numbers and mitigation of stressors.