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Summary: General and State-Specific Priorities for Reef Research Coordinating Institutes
Attachment for Funding Opportunity Number NOAA-NOS-OCM-2025-28920

General Research and Capacity Needs

Research gaps	Capacity needs
● Conduct research to understand how coral reefs respond to impaired water quality ● Develop water quality criteria benchmarks ● Study water quality impacts on stony coral tissue loss disease and other coral diseases ● Conduct genetic identification of coral species ● Conduct coral larval connectivity studies with applications for management and conservation ● Develop and scale coral sexual propagation techniques and facilities ● Identify factors affecting coral resistance and resilience to coral bleaching ● Develop coral bleaching interventions ● Improve prevention, detection, prediction, response and restoration of invasive species	● Collaborate on the development and publication of public reports ● Assist in hosting meetings, workshops, symposiums, and knowledge exchanges ● Provide SCUBA and/or scientific dive training ● Assist with communications, public outreach and education, community engagement, graphic design, and development and production of educational materials ● Assist in coral reef and benthic monitoring

Research and Capacity Needs by State: Atlantic/Caribbean Basin

State	Research gaps	Capacity needs
Florida	● Develop decision support systems	● Assist in hosting biennial Florida's Coral Reef (FCR) symposiums and workshops ● Provide capacity support for FCR's Resilience Program, including emergency response capacity to address large-scale disturbances ● Provide capacity support for Florida's Department of Environmental Protection and Fish and Wildlife Conservation Commission ● Support coordinated messaging across partners and to the public about FCR
Puerto Rico	● Assist with evaluating ecosystem-level impacts from coral disease mortality ● Assist with analyzing: ○ the effectiveness of Marine Protected Areas in maintaining biodiversity ○ the need for regulatory limits for parrotfish	● Create a genetic management plan ● Provide capacity support for the Coral Reef Conservation & Management Program, including education and outreach and legal interns ● Develop an education curriculum or awareness campaign for the Marine Rangers program. ● Provide support for training in Emergency Response Protocols
United States Virgin Islands (USVI)	● Research coral bleaching interventions and large-scale prevention options	● Create a genetic management plan ● Conduct herbivore restoration ● Provide staff capacity support to expand communication tools ● Provide staff capacity support for database management ● Provide staff capacity support and technical training to conduct fieldwork ● Develop coral rescue nursery space and capacity for long-term care

Research and Capacity Needs by State: Pacific Basin

State	Research gaps	Capacity needs
American Samoa	● Develop a coral propagation and gene bank ● Assist with identifying resilient reef areas and coral species ● Research to help improve techniques and approaches for coral restoration methods and deployment ● Assist with analyzing coral and other samples	● Provide capacity support and/or coordination during disturbance events ● Provide capacity support for data analysis of AS Coral Reef Monitoring Program datasets ● Provide capacity support for education and outreach activities ● Provide capacity support by hosting coral restoration, SCUBA, boating, database development, and grant writing trainings
Commonwealth of the Northern Mariana Islands (CNMI)	● Assistance with the development of a regional coral genetics repository ● Conduct coral sexual reproduction, including assisted fertilization, larval rearing, and larval outplanting ● Assistance in monitoring for aquatic invasive species using eDNA ● Determine the scale of coral restoration required to sustain current coastal protection services	● Provide capacity support for aquatic invasive species ● Provide capacity support through drone photography and videography training ● Assist in developing a dive reciprocity program that certifies locals in scientific dive standards ● Assist in developing a community snorkel/dive volunteer program ● Produce training materials for identifying corals and other marine life, diseases, health impacts, etc. ● Provide GIS assistance

Hawai'i	● Conduct assessments for coral reef ecosystem species	● Provide capacity support for coral reef and fisheries managers ● Offer graduate students opportunities to develop and conduct applied research relevant to coral reef management ● Provide professional development opportunities in a hybrid format for coral reef managers located across the State
Guam	● Conduct high-resolution imagery of coral reefs using drone photography and photogrammetry ● Develop an ex situ coral gene bank ● Conduct research on sexual reproduction, including assisted fertilization, larval rearing, and larval outplanting ● Conduct research to evaluate techniques and approaches for coral restoration success ● Assist with coral disease and invasive species identification	● Provide capacity support for large-scale disturbance response ● Serve as a data repository for large datasets (e.g., photogrammetry/3D modeling) ● Conduct photogrammetry analysis ● Provide capacity support for monitoring and restoration ● Conduct invasive species monitoring, response, and public outreach/education ● Produce training materials (e.g., videos or field guides) for identifying corals and other marine life, diseases, etc. ● Conduct youth programs to encourage local interest in marine science ● Assist with water quality monitoring

Note that these priorities were provided by the US Coral Reef Task Force All Islands Committee. They may not reflect NOAA's priorities and are provided as examples only. Submissions have been edited for length and clarity by NOAA staff.