

U.S. All Islands Coral Reef Committee

Chair's Report

October 15, 2020



U.S. All Islands
Coral Reef
Committee



AIC CHAIR'S REPORT

OCTOBER 2020

AIC Vision

Thriving coral reef ecosystems, effectively managed to protect their ecological, social, and economic value for future generations.

AIC Mission

To be a unified voice for the effective management of coral reef ecosystems in the U.S. and Freely Associated States.

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FROM THE CHAIR

Hafa adai, Talofa, Aloha, Hola, Alii, and Hello,

It is my pleasure, on behalf of the U.S. All Islands Coral Reef Committee (AIC), to present this report on our activities, accomplishments, and emerging issues. While we miss being able to discuss these issues with you in person during a full meeting of the USCRTF, we look forward to continuing to work on these important topics virtually.



Despite the impacts to ongoing operations due to the global pandemic, the AIC jurisdictions have been working diligently to combat the local stressors in each of our places, despite mounting global and regional threats. Both basins are facing major coral threats, with the expansion of stony coral tissue loss disease throughout the Caribbean, and coral bleaching becoming more common across the Pacific. Despite the growing challenges, the jurisdictions continue to strive towards improving policies, partnerships and programs to support healthy coral reefs.

The AIC remains committed to reducing impacts to coral reefs within our jurisdictions including a new priority focusing on improving water quality standards, and improving compliance with ballast water protocols. We would like to thank the many federal agencies and partners who have stepped up to support these efforts to ensure the people, economies, coastlines and coral reefs in the US Jurisdictions can once again thrive.

As always, we look forward to continuing to find innovative solutions by working together, as federal agencies and jurisdictions, to make a positive difference for our coral reefs.

We are excited to share with you all the coral reef-related efforts and endeavors happening across the jurisdictions. Should you have any additional questions or would like more information on anything included in this report, please reach out to me, or the AIC Executive Director, Kristine Bucchianeri.

Sincerely,

Jean-Pierre L. Oriol
AIC Chair

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AIC PRIORITIES

Our top priorities in October 2020 are:

- Support for the Restoring Resilient Reefs Act
- Innovation and Expansion of Coral Reef Restoration
- Improving Coral Reef Response under FEMA
- Improving Water Quality Standards
- Expanding Coral Disease Interventions, including Ballast Water Management
- Expanding USCRTF support for the Freely Associated States
- Cultivate sustainable Task Force support for the Coral Fellowship Program

Support for the Restoring Resilient Reefs Act (S.2429/H.R.4160)

One of the AIC's top priorities remains the reauthorization of the Coral Reef Conservation Act (CRCA) of 2000, and the Restoring Resilient Reefs Act (S. 2429/ H.R. 4160) is a strong update to **our nation's main coral reef statute**. **The RRRRA contains critical measures and associated resources to protect and effectively manage and restore coral reef ecosystems** in the U.S and the islands, where the management needs for the nation's coral reefs are greatest.

The CRCA was landmark legislation that made coral reef conservation a national priority. It helped spark a flurry of research about our reefs and got people thinking seriously about how to best manage and ultimately restore them. While we know a lot more than we did 20 years ago, the legislation hasn't been enough to halt the decline of our reefs in the water, where it actually matters. A big reason why is that we need better coordination and clearer lines of responsibility among federal, state, and local agencies involved in coral reef conservation.

The bill also helps realign the federal/state/local collaborations to allow each of our agencies to do what they do best, in order to share the conservation workload and produce better outcomes for our reefs. We hope to have strong support from our federal agency partners to pass the Restoring Resilient Reefs Act in 2020.

The issues of particular importance to the jurisdictions in any coral legislation include:

- **Increasing funding over the next 5 years**, with a designated percentage going directly to jurisdictions for on the ground management and project implementation.
- **Ratification of the US Coral Reef Task Force** including establishment and funding for a USCRTF Secretariat.
- **Formalization of and funding for the USCRTF Coral Reef Management Fellowship** to build long term local capacity.
- **Creating a Coral Reef Conservation Emergency Fund** to ensure emergency financing is available for coral reef injuries, restoration, and interventions.
- **Establishing Coral Reefs as maintained or engineered infrastructure.**

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- **Building capacity in the AIC jurisdictions in partnership with Federal Agencies.** Local and federal government capacity is very limited in ramping efforts up to the level needed to take on the immensity of this situation. Investing in people is a major need if needed policies have any chance of being implemented.
- **Support for testing, implementation, and scaling of interventions identified in the National Academies studies funded by NOAA.**

MAIN POINTS: Support is needed to ensure new enabling legislation for coral is passed, which includes ratification of the USCRTF.

Innovation and Expansion of Coral Restoration

With the rapid spread of Stony Coral Tissue Loss Disease (SCTLD) throughout the Atlantic/Caribbean, and the increasing frequency of bleaching events in the Pacific, adaptive coral restoration is becoming an essential tool to support the future of coral reefs. The jurisdictions are building capacity to ensure they can utilize this tool as part of a comprehensive coral reef management program, and are eager to utilize new techniques and technologies to help expand restoration efforts.

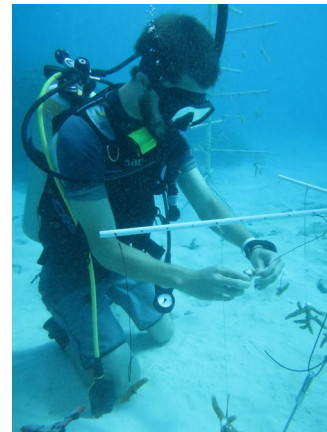
The Pacific Jurisdictions are in the final stages of developing Coral Restoration Plans, to guide their path forward with where and how they would like to restore their coral reefs. These locally driven plans are essential to establishing clear goals and establishing local ownership over these decisions. While the Atlantic/Caribbean jurisdictions battle SCTLD, they are concurrently developing plans to establish where and when to start repopulating and restoring reefs.

While capacity building for coral restoration is an ongoing need in every jurisdiction, support to implement coral restoration plans is also an immediate need. As these plans are finalized, implementation of high priority projects will begin moving forward immediately.

Additionally, **the US Jurisdictions are looking for Federal support to establish programmatic permits for sites that are a high priority for restoration.** A process for obtaining permits needs to be developed quickly to allow for implementation of restoration plan elements, and concurrently with research and management-directed activities.

While we are off to a solid start, **there is more work needed to attain our goal of locally managed, active restoration activities in each jurisdiction.** We look forward to expanding these collaborative efforts, along with enhanced stressor reduction activities, to help restore our coral reefs.

MAIN POINTS: Support is needed for **implementation of jurisdiction Coral Restoration Plans**, as well as **establishing programmatic permits** for sites that are a high priority for Restoration.



University of Guam graduate student Andrew McInnis attaches a staghorn coral fragment to a deployed coral tree in December 2019 in the Piti Bomb Holes marine preserve.
Credit: University of Guam

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Improving Coral Reef Response under FEMA

The AIC would like to thank the many agencies who have contributed to support FEMA's recognition of coral reefs as valuable resources and infrastructure. Natural disasters are becoming more common in the US Coral Jurisdictions, and are causing major harm to people, places, economies and essential ecosystems. As we all know, coral reefs are proven to reduce storm impacts to coastal communities -- preserving property, livelihoods and lives.

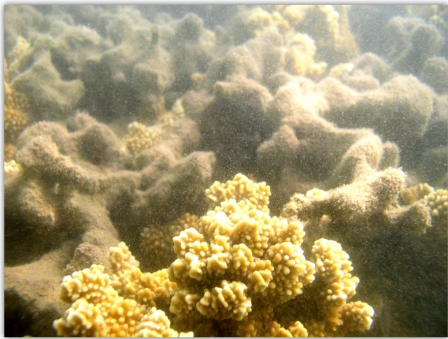
The AIC would like the US Coral Reef Task Force's support in ensuring that as these new FEMA benefits become available, appropriate training is provided to jurisdiction officials via targeted learning exchanges, to ensure all jurisdictions have access to programs and funds to protect and restore coral reefs after a major disaster.



Shoreline Debris, following Typhoon Yutu in CNMI. Credit: CNMI CZM

MAIN POINTS: We look forward to continuing to partner with federal agencies on disaster response and identifying the best path forward for ensuring jurisdiction officials are trained to access new response mechanisms, as they become available.

Improving Water Quality Standards



Sedimentation impacts on corals Credit: NOAA, K. Chaston.

We would like to thank the EPA for taking a leadership role on the AIC request for support to improve coastal water quality standards specifically to support coral health. We recognize that creating standards is challenging given the baseline conditions and resources are quite different from island to island and site to site. Nutrients, sediment/turbidity, salinity, pharmaceuticals, personal care products and toxicants are all of concern.

The AIC knows that improving water quality is one of the most impactful ways to support coral reef health and resilience on the ground in our jurisdictions, and **we look forward to working with the relevant USCRTF agencies to identify the metrics, key targets/ranges and implementation strategies for addressing this critical element of coral reef protection.** Additionally, we look forward to improving cooperation between local and federal agencies through the implementation of existing mandates to strengthen efforts to increase coral reef resilience.

MAIN POINTS: We are looking for partners to help develop and implement strategies to improve water quality standards and metrics in the jurisdictions.

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Expanding Coral Disease Intervention, including Ballast Water Management

Unfortunately, Coral Disease continues to be a major threat to corals in Florida, Puerto Rico, the US Virgin Islands, as well as across the broader Caribbean. Expanded research and intervention is still needed to help mitigate Stony Coral Tissue Loss Disease (SCTLD). Additional capacity and support is needed in all 3 jurisdictions.

While SCTLD has not yet reached the Pacific Jurisdictions, they are very concerned about the potential spread of the SCTLD, or other potential pathogens. Improving Ballast Water Management across the US Jurisdictions is an essential step in protecting coral reefs from Alien Invasive Species, as well as disease-causing pathogens and pollutants.

By creating navigation corridors to limit risk of reef exposure, we can minimize multiple threats from ballast water and hull fouling. Consideration of proactive measures to manage vessel hull fouling and ballast water treatment and discharge protocols, practices and compliance are needed.

This can be accomplished by **ensuring compliance with existing bilge water discharge requirement of discharging before vessels enter the EEZ and creating vessel passage corridors that avoid sensitive coral reef areas**. This should be coordinated with Federal resource agencies (NOAA, DOI, USEPA and USCG) and State and Territories in the Atlantic and Caribbean as well as the Pacific.

MAIN POINTS: We look forward to coordinated efforts to ensure compliance with existing water discharge requirements, and establishing vessel passage corridors that avoid sensitive coral reef areas and new ideas to support SCTLD response activities.

Improving USCRTF Support in the FAS

After a highly successful USCRTF Meeting in Palau in September 2019, the AIC wants to ensure that the needs of our partners in the Freely Associated States are a priority for the USCRTF. As affiliate members, the issues, needs and successes of the FAS are often not as prominent as for the US Jurisdictions at USCRTF Meetings. The AIC is committed to supporting the FAS in coral reef management, and look to the USCRTF membership to help improve coral reef management support across the FAS.



Remote and uninhabited island of Bikar Atoll, October 2019. Credit: Emma Kabua-Tibon, MIMRA

MAIN POINTS: We need to identify clear pathways to improve USCRTF Support of FAS States and their issues, concerns and priorities for coral reef management.

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Coral Reef Management Fellowship Program



The 2020-2021 Coral Reef Management Fellows, with their supervisors at Fellowship Orientation in February 2020. Credit: K. Bucchianeri

The AIC would like to thank the NOAA Coral Reef Conservation Program, U.S. Department of the Interior's Office of Insular Affairs, Nova Southeastern University, and our own agencies' leadership for their continued financial, technical and programmatic support of this capacity building program. **We are happy to report that 7 fellows were hired in 2020, and are all working hard on projects identified by their jurisdiction, despite the impacts of COVID-19.**

Our 2018-2019 class of fellows completed their fellowships, and excelled at the projects they led and contributed to. We are thrilled that multiple fellows continue to work in their jurisdiction, to support coral reef management priorities, while others plan to continue their education in relevant fields.

The Coral Reef Management Fellowship continues to be the most important capacity building program available to cultivate the next generation of coral reef managers. This program provides essential training to young managers and provides them with skills to create effective programs to combat the major impacts to coral reef ecosystems.

While we have a strong record of retaining coral fellows in the jurisdictions once the program is complete, we continually strive to find ways to improve this program. Right now, we are specifically looking at how to better target local young professionals for these positions. We are looking to develop a new set of recommendations for the hiring process to better incorporate local knowledge and skills.

The Task Force has long identified capacity building as a target issue and one of the biggest coral reef management needs in the jurisdictions. **The Coral Reef Management Fellowship Program is one of the most valuable elements of support for enhanced local capacity and yields benefits not only for the Task Force and its members, but more importantly, to our coral reef resources.**

MAIN POINTS We continue to look for new resources to sustainably support this important program for the long term. We look forward to working with the Task Force in building local capacity through a formalized and sustained Fellowship Program.

AIC MEMBER PRIORITIES AND ACCOMPLISHMENTS

This and the following section contains information and updates from each of the U.S. coral reef jurisdictions and Freely Associated States, including:

- Top 1-3 coral reef management-related priorities;
- Top 1-3 most notable coral-related accomplishments or successes; and
- Notable challenges, issues, or needs that Task Force members should know about.

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American Samoa



Staff from Horsley Witten Group, AS-EPA, and Crag look at local stormwater BMPs during a training for contractors.
Credit: Coral Reef Advisory Group

Priorities

- 1) ORGANIZATIONAL IMPROVEMENTS: Coral Reef Advisory Group (Crag) member agencies focused on updating, organizing, and prioritizing territorial coral management goals and updating coordination procedures between relevant agencies.
- 2) VALONIA OUTBREAK MONITORING: Crag continues to monitor extent and severity of Valonia outbreak in Manu'a.
- 3) WATERSHED MANAGEMENT: Through collaborations with NOAA Pacific Islands Science Center, Ridge to Reefs, and San Diego State University, the Territory focused on strengthening science and management in local and national priority watersheds, including Faga'alu, especially in preparation for its graduation.

Accomplishments & Successes

- 1) INTEGRATING CONSERVATION WORK: Local integrated watershed and reef monitoring village-based reports for Tutuila were completed; surveys for a condition status report (2016-2020) will happen soon.
- 2) MAPPING LARGE CORAL HEADS: Three agencies conducted tow-board surveys around Ta'u, Manu'a to catalogue exceptionally large *Porites* colonies. A manuscript is under review.
- 3) IMPROVING STORMWATER MANAGEMENT WITH PRIVATE INDUSTRY: AS-EPA and Crag Coordination hosted a Horsley Witten Group training for contractors on erosion and sediment control & post-construction storm water issues and BMPs.

Notable Challenges, Issues, & Needs

Assistance has begun, but the jurisdiction continues to need **technical capacity regarding ecologically and economically sound aquaculture.**



A diver surveys *Big Momma*, a giant *Porites* coral head near Ta'u, Manu'a.
Credit: Changing Seas/South Florida PBS

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Commonwealth of the Northern Mariana Islands



Crown of Thorns Sea star seen next to a partially eaten coral colony from Bird Island, Saipan in August 2020.

Credit: Denise Perez, PhD.

Priorities

- 1) **WILDFIRE MANAGEMENT:** The CNMI's Coral Fellow has been working on creating the framework for the CNMI's first Wildfire Management Plan which includes post-disturbance response and revegetation.
- 2) **EYES OF THE REEF MARIANAS:** Efforts to increase participation in citizen science and community monitoring programs are underway with the launching of Eyes of the Reef Marianas, which trains volunteers to identify and report impacts to coral reefs.
- 3) **CROWN OF THORNS SEASTAR OUTBREAK:** The Marine Monitoring Team continues to do COTS assessments around the islands, with a recent outbreak at the Bird Island Sanctuary and increased numbers at several other sites.

Accomplishments & Successes

- 1) **LONG-TERM MONITORING:** The Marine Monitoring Team surveyed 20 long-term marine monitoring sites and completed photomosaics at 6 forereef sites for >5,600m² of reef area surveyed.
- 2) **BUILDING LOCAL CAPACITY:** Fifteen post-secondary students participated in and completed DCRM's annual summer internship program. This year marks the program's 18th cohort, bringing the total number of participants to 156.
- 3) **RIDGE TO REEF MANAGEMENT:** The CNMI's Coral Fellow completed fire models to identify areas that are most susceptible to fires during the dry season. This will assist in identifying fire patterns and which ecosystems are most threatened.

Florida

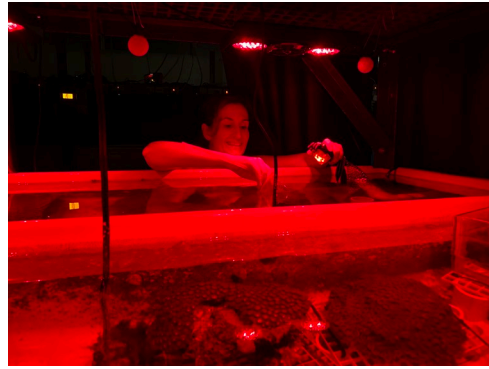
Priorities

- 1) **ONGOING CORAL DISEASE OUTBREAK:** Significant partner efforts continue to research, intervene, and mitigate impacts of Stony Coral Tissue Loss Disease to Florida's Coral Reefs, including coral rescue beyond the disease boundary and propagation infrastructure development.
- 2) **FLORIDA KEYS NATIONAL MARINE SANCTUARY RESTORATION BLUEPRINT:** Public comment for the initial draft ended January 31, 2020. NOAA will formally propose a set of draft regulations to establish changes of the sanctuary's boundary, regulations, and marine zones.
- 3) **DISEASE RESPONSE STRATEGIC ACTION PLAN DEVELOPMENT:** The disease response network is building consensus on actions for coordinated response to guide future response activities.

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Accomplishments & Successes

- 1) FLORIDA'S CORAL REEF CAMPAIGN: Governor DeSantis announced a new awareness campaign to increase recognition and cultivate a sense of environmental stewardship for Florida's Coral Reef. Over 3,800 people visited the Florida's Coral Reef booth at Super Bowl LIVE.
- 2) SUPER BOWL CORAL REEF RESTORATION PROJECTS: FORCE BLUE and partners kicked off *100 Yards of Hope* that restored 100 yards of coral reef as part of Super Bowl 2020 in Miami. Phase 2 will be completed as part of Super Bowl Tampa in 2021.
- 3) PROMISING STONY CORAL TISSUE LOSS DISEASE DEVELOPMENTS: Smithsonian Institute discovered naturally occurring bacteria that produces antimicrobial compounds that can slow or arrest lesion progression. Field trials underway. Also, eighteen Association of Zoos and Aquarium-accredited facilities located around the country now care for over 1,500 rescued corals with little to no external financial assistance.
- 4) UNPRECEDENTED STATE FUNDING FOR CORAL REEFS: In recognition of the urgent and serious challenges facing Florida's Coral Reef, the Governor approved a new \$10 Million Coral Reef Protection and Restoration Grant and over \$5 Million in reoccurring coral-related Resilience funding. New funding will support priority projects to help restore the resilience of Florida's Coral Reef.
- 5) CORAL SPAWNING SUCCESES: Partner highlights include restored micro-fragmented massive corals observed spawning for first time in wild and successful lab-induced spawning of Threatened Atlantic pillar coral for 2nd year in a row.



Nova Southeastern University's Rachel Ionata capturing eggs during a coral spawning event in 2020. *Credit: Nova Southeastern University*

Notable Challenges, Issues, & Needs

For the long-term survival of Florida's coral reefs, it is essential to pursue strategic restoration. This requires careful consideration of restoration in the context of this endemic disease, including an understanding of a) the potential impacts of disease on newly out planted corals, and b) when large-scale restoration can be initiated with a reasonable certainty that those efforts will not reignite the disease outbreak. It is necessary to **begin planning and building the infrastructure needed for large scale restoration** – while incorporating local restoration efforts like NOAA's Mission Iconic Reefs plan to restore nearly three million square feet at seven iconic sites in the Florida Keys National Marine Sanctuary. **Technical support and funding is needed for developing the overarching restoration plan, and for building, operating, and maintaining the infrastructure needed for large scale restoration.** These activities will be pursued in conjunction with continuing efforts to improve the enabling conditions for coral survival by addressing the large-scale drivers of reef decline (e.g., water quality, direct and indirect impacts, etc.).

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Guam

Priorities

- 1) **UPSCALING RESTORATION:** Guam Reef Restoration and Intervention Partnership (GRRIP) team continues to escalate reef restoration efforts, including expansion of two coral nurseries and increased outplanting at reef flat sites.
- 2) **PREPARING FOR BLEACHING:** Guam Agencies and Visitor's Bureau launched the Guam Coral Bleaching Alert Network to raise public awareness of coral bleaching impacts and encourage reef-safe behaviors while corals are facing thermal stress.
- 3) **ASSESSING REEF HEALTH:** Long-term Monitoring Program staff conducted coral surveys at the Piti and Tumon sites and UOG staff, students, and partners began island-wide staghorn surveys funded under a grant from NFWF.



Guam EPA has received a grant from the NOAA Marine Debris Program to remove approximately 2,500 tires that were installed in the Malesso Lagoon in 1969 as an artificial reef structure.

Credit: Guam EPA

Accomplishments & Successes

- 1) **WILDERNESS ARSON INVESTIGATION CERTIFICATION:** Staff from Department of Agriculture Forestry Division, Guam Police and Fire Departments, and Navy firefighters were certified in wildland arson investigations. A bill related to prevention and prosecution of wildfires has been introduced.
- 2) **USAGE AND PERCEPTION SURVEYS:** Guam's Coral Fellow developed survey instruments and protocols to collect data from coastal landowners and the general public about the usage, perceptions, and conservation of Guam's seagrass and mangrove habitats.
- 3) **CORAL TRANSPLANT FROM TIRE REEF:** Guam EPA and partners developed a plan to transplant corals that have grown on the tire reef in the Malesso Lagoon, which will be removed in 2021 with funding from the NOAA Marine Debris Program.

Notable Challenges, Issues, & Needs

From 2013-2017, **Guam lost approximately one third of all shallow corals island-wide, largely due to severe bleaching. Guam is currently at alert level one bleaching status and is expected to reach alert level two in 1-4 weeks according to NOAA Coral Reef Watch.** The most pressing local impacts to Guam's reefs include overfishing, degraded water quality, and COTS outbreaks. A scuba spear-fishing ban was passed in March 2020, a public hearing for a bill related to prevention and prosecution of wildland arson is scheduled for October 2020, and legislation to address coral damage caused by vessel groundings is expected in 2021. More resources will be needed for enforcement of these laws. Guam also needs funding for increased watershed restoration. The COVID-19 pandemic has resulted in a drastic decline in visitors to the island, presenting a unique opportunity to study coral health and fish behavior in the absence of tourists and assess changes that occur when tourism rebuilds in the future.

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Hawai'i



Clearing out twenty years of accumulated sediment at Kahana Nui basin, West Maui to restore capacity. *Credit: West Maui R2R*

Priorities

- 1) MARINE 30X30 INITIATIVE: Hawai'i's Division of Aquatic Resources (DAR) is leading the Marine 30×30 Initiative, which focuses on developing and strengthening the essential components of effective management, including development of: a resilient marine managed area network; statewide fisheries rules; outreach and enforcement strategies; monitoring; and restoration.
- 2) SUSTAINABLE FINANCE: The Division of Aquatic Resources is conducting a feasibility study for an ocean-user fee to determine if it is a viable approach to implement in the future.
- 3) CENTRALIZED DATABASE: DAR now has a centralized cloud-based database. It is being designed to present DAR data in ridge-to-reef summaries with streams, estuaries and marine projects all contributing to improved management of aquatic resources.

Accomplishments & Successes

- 1) HAWAII CORAL REEF STRATEGY 2030: In summer 2020, DAR updated their coral reef strategic plan which identified a new set of pillars, goals, and objectives to serve as a framework for management activities for coral reefs in the Main Hawaiian islands for the next decade.
- 2) CORAL RESTORATION PERMIT FRAMEWORK: DAR is developing permitting protocols for coral restoration projects. These protocols will not only expedite the permitting process, but also ensure that coral reefs are being restored in a mindful way with appropriate methods and in suitable locations.
- 3) ENFORCEMENT ANALYSES: The Division of Conservation and Resource Enforcement is developing a database to understand spatio-temporal trends of officers' activities and their relationship to compliance and monitoring.

Notable Challenges, Issues, & Needs

In summer 2019, Hawai'i experienced another coral bleaching event. Although less severe than in 2015, the coral reefs in West Hawai'i were impacted. While the response from the State and partner agencies was substantial and well-coordinated, they still struggled with the rapidly changing landscape. Corals that were affected by the 2015 bleaching are now collapsing into rubble fields, and large swell events are impacting the remaining fragile reef structures. Concern is growing that reefs will struggle to recolonize these areas of loose rubble. **Assistance is needed to explore how to increase resilience and restore reefs in West Hawai'i.**

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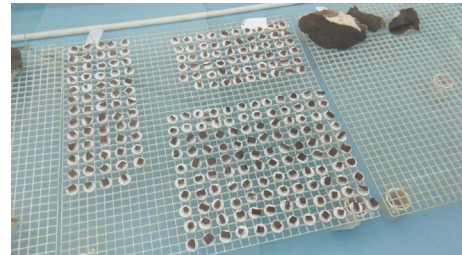
Puerto Rico

Priorities

1) SCTLD RESPONSE: Coordination and response to the Stony Coral Tissue Loss Disease includes organizing and participating in trainings, promoting communication with other jurisdictions and with local stakeholders, identifying funding for the response, and establishing courses of action for colonies at risk.

2) CORAL EMERGENCY RESPONSE VOLUNTEERS TRAINING: The local coral volunteer group EREA has been reactivated and 20 participants are training on coral identification, monitoring, and response after emergencies such as high wave energy events and diseases.

3) PREPARATION FOR RESPONSE TO HIGH WAVE ENERGY EVENTS: Kick-off meeting with 22 local collaborators to initiate the implementation of the Rapid Response Protocol for Coral Reef Emergencies due to high wave energy events.



Microfragments of *Orbicella faveolata* at the UPR-Marine Science Department land-based nursery in La Parguera, with the support of NOAA-RC and CRCP.
Credit: University of Puerto Rico in Mayaguez- Marine Science Department

Accomplishments & Successes

1) CORALS AS COASTAL PROTECTION: Received Pre-approval of the San Juan Coral Reef Barrier Hazard Mitigation Grant Program (Stafford Act Section 404). The \$10.3M request covers a risk mitigation and coastal protection project, consisting of the deployment of hybrid structural components and coral outplants.

2) SCTLD RESPONSE: SCTLD reconnaissance virtual training with over 70 participants from Puerto Rico and other Spanish speaking jurisdictions. Follow-up test evidenced that most of the participants learned about SCTLD and are willing to support the reconnaissance and response efforts.

3) LAND-BASED CORAL NURSERY ESTABLISHED: Establishment of the first coral restoration land-based nursery in Puerto Rico began operating at the University of PR- Marine Science Department, Micro-fragmenting corals for propagation has been initiated, with the support of the NOAA Restoration Center and CRCP.

Notable Challenges, Issues, & Needs

Puerto Rico urges the USCRTF to **continue efforts to foster and identify funding sources to mainstream coral restoration and hybrid interventions to mitigate coastal hazards and reduce risks for coastal communities and infrastructure.** In addition, island-wide surveys are needed to identify other reef areas under major risk of the SCTLD or that could have been impacted by the recent earthquakes.

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U.S. Virgin Islands



Trained Strike Team Diver removes coral affected by Stony Coral Tissue Loss Disease.
Credit: Blake Gardner Photography

Priorities

- 1) CORAL DISEASE OUTBREAK CONTINUES: A Coral Disease Response Coordinator has been hired, in coordination between the local government and University of the Virgin Islands.
- 2) EXPANDING OUTREACH: To increase awareness of corals, USVI has been utilizing social and print media, including a coral education ad program with the VI Daily News, and a new Environmental Outreach Coordinator for the East End Marine Park.
- 3) NATURAL RESOURCES ENFORCEMENT APP: The Department developed and launched a reporting app that allows community members to submit anonymous tips pertaining to the misuse of the territory's natural resources (includes fish & wildlife, permits, coastal zone, and enforcement).

Accomplishments & Successes

- 1) INCREASING CAPACITY FOR SCTLD RESPONSE: Completed a training program for strike team volunteers and established official Strike Teams on St. Thomas, St. John, and St. Croix complete with online training, in-water training, data collection, and supply distribution, in coordination with the CORE Foundation.
- 2) SCTLD COOPERATION: USVI established the Executive Team on the Virgin Islands Coral Disease Advisory Committee which solidifies a partnership between DPNR, the National Park Service, the University of the Virgin Islands, and NOAA CRCP. The first action of this Executive Team was to officially endorse the Coral Disease Outbreak Response Plan for the USVI.
- 3) NEW TERRITORIAL MANAGEMENT PLANS: USVI has completed the Coral Reef Priorities Document, the Coral Disease Outbreak Response Plan, and assisted with the completion of the Marine Debris Emergency Response Guide which will all help the territory manage coral reef resources.

Notable Challenges, Issues, & Needs

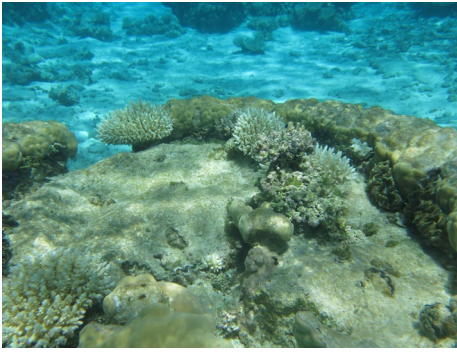
Stony Coral Tissue Loss Disease remains the main challenge to the USVI coral program. **Securing funds to respond to and manage this outbreak is imperative. Additional staff on the ground are sorely needed to coordinate and implement a response. Development of new treatment methods are critical.** The various stops and starts of activity to attributed pandemic has limited action on Disease interventions, outreach while ongoing has been curtailed.

The USVI saw an increased level of maritime activity during the pandemic and has highlighted the increased need for marine spatial planning.

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AIC AFFILIATE MEMBER PRIORITIES & ACCOMPLISHMENTS

Federated States of Micronesia



Coral recovery in Ahnd atoll in Pohnpei.
Credit: Dave Mathias, FSM R&D

Priorities

- 1) REPLANTING MANGROVES TO PROTECT COASTLINES: Resource managers are working to restore mangroves in Utwe and Lelu. Planning with is ongoing with relevant stakeholders.
- 2) ONGOING MONITORING OF GROUPER: Grouper population monitoring continues, to assess an annual closure of the fishery from January to May.

Accomplishments & Successes

- 1) MPA SPATIAL PLANNING BEGUN: Two spatial planning workshops were held, in Walung and UBR, with assistance from TNC, which will lead to management plans that incorporate traditional knowledge. Additional workshops will be held throughout 2020.
- 2) NATIONWIDE MONITORING COMPLETE: Monitoring of coral reef throughout the nation has been completed and awaits analysis from the University of Guam.

Republic of the Marshall Islands

Priorities

- 1) BIKAR AND BOKAK EXPEDITION: MIMRA and partners set out to two of the most remote northern atolls to conduct the country's first ecological assessment for research and conservation purposes.
- 2) PROCESSING OF LARGE CORAL REEF DATA SETS: MIMRA has finished processing benthic image files from 7 atolls in order to share findings and management recommendations with local communities.
- 3) REIMAANLOK WORK CONTINUES: CMAC continues to collect and share data with communities to further facilitate the development of resource management plans and protected areas.



MIMRA surveyor, Kalena deBrum, with school of jacks in Bikar Atoll, October 2019. Credit: Erin Feinblatt, Stills - Motion

Accomplishments & Successes

- 1) BIKAR AND BOKAK EXPEDITION: Completion of Bikar and Bokak mission with study to serve as a baseline for future resource management decisions and for future research and comparison with other atolls in the RMI.

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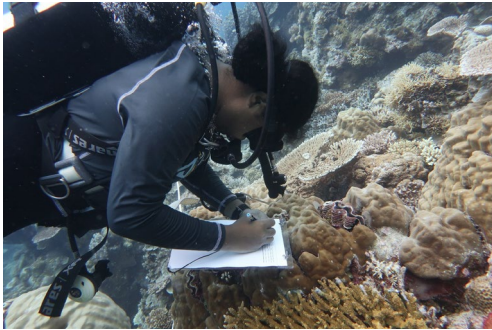
2) TRANSLATING SCIENCE FOR A COMMUNITY AUDIENCE: Completed processing of almost 20,000 benthic photos and turned them into readable graphs and tables for communities to better understand the composition of their reefs. This helps MIMRA with explaining the correlation between reef health and fish abundance, and other ecosystem relationships.

3) CREATING STRUCTURE FOR PAN: Further development of RMI's Protected Areas Network (PAN) including drafting of a strategic plan and PAN regulations with CMAC members.

Notable Challenges, Issues, & Needs

MIMRA still faces the same issues that were shared at the last meeting including transportation/logistical constraints; limited financial and technical commitments from partners; and limited capacity in monitoring and enforcement by local governments. Rising climate-induced issues such as disease epidemics like the dengue fever have also impacted our work in the RMI due to recent inter-island travel bans.

Republic of Palau



Researcher Assistant LeahMarie Bukurou counting inverts in Ngerumekaol MPA, Koror State. Credit: PICRC

Priorities

- 1) GROUPEER ASSESSMENT: Grouper assessments of aggregation density during the year has been conducted; data analysis is underway and reporting should be available in December 2020.
- 2) PAN MPA ASSESSMENTS: Second follow up assessments have been completed at all states with Protected Area Network (PAN) MPA's, with some reports written and others in progress; expected to finish reports by December 2020.
- 3) LONG TERM CORAL REEF MONITORING (CRM): Continuing of long term monitoring at 23 permanent sites (since 2001) has started in September 2020, where 2 depths are surveyed (3m and 10m).

Accomplishments & Successes

- 1) EXPANDED OUTREACH TO SUPPORT PNMS: Palau National Marine Sanctuary Communications and Outreach Strategy is being formulated to streamline the PNMS message for the public.
- 2) MPA EFFECTIVENESS REPORT COMPLETE: A comprehensive report on the PAN MPAs (2019-2020 surveys) has been written and published on the PICRC website; a publication is being worked on now with collaborators.

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AIC POINTS OF CONTACT AND SECRETARIAT

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