

37th U.S. Coral Reef Task Force Business Meeting Highlights

General Summary:

The 37th U.S. Coral Reef Task Force (USCRTF) Business Meeting was held on February 23, 2017.

National Oceanic and Atmospheric Administration (NOAA) Co-Chair Russell Callender spoke about his personal experiences with corals and his excitement about being a part of the USCRTF. Department of the Interior (DOI) Co-Chair Shawn Buckner mentioned the importance of coral reefs for facilitating biodiversity and economic gains, and the role of the USCRTF in addressing threats to corals.

The Co-Chairs spoke on the productivity of the Task Force in 2016, including the approval of the U.S. Coral Reef Task Force Strategy that will frame the work of the Task Force moving forward, an updated Watershed Partnership Initiative Strategy which will help implement and graduate watersheds and build stronger capacity at other jurisdictional priority watersheds, and the creation of the Handbook on Coral Reef Impacts: Avoidance, Minimization, Compensatory Mitigation, and Restoration that will be a resource for coral reef managers and project proponents. They also discussed the role corals play in coastal flood protection.

Highlights from the meeting include:

- Attendance of 17 USCRTF principals consisting of 11 Federal Members and 5 State and Territory Members, including 2 Governors and a territorial Attorney General
- Re-invigoration of the Education and Outreach Working Group will be valuable for USCRTF's path forward
- Release of the Handbook on Coral Reef Impacts: Avoidance, Minimization, Compensatory Mitigation, and Restoration
- Presentations on modern science, technology, and coral restoration methods that offer reasons for hope for corals
- Presentation regarding the valuable economic asset corals serve as a mechanism for flood protection

Governor Remarks:

Governor Eddie Baza Calvo of Guam, Governor David Yutaka Ige of Hawaii, and Attorney General Talauega Eleasalo V. Ale of American Samoa expressed the importance of coral reefs in the economy, ecology, and culture of their islands, and recognized the importance of the USCRTF as a mechanism for connecting states and territories with the federal government.

Governor Calvo:

Governor Calvo mentioned the importance of addressing the coral reef threats in the states and territories. Governor Calvo referenced [The History of the Mariana Islands](#), which focused on the experience of the Jesuit priests in the 17th century and gave the Governor an insight into the culture of his region before it had been influenced by European culture. Governor Calvo connected what he learned to the long-term reliance that Guam has on the ocean. He explained that the people of

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Guam depend on corals as natural resources for food and tourism, with an estimated value \$127 million per year. He expressed that the people of Guam can directly see the impacts of threats to coral reefs, and identified devastation of the reefs as a threat to the people and economy of Guam. He said that Guam is taking actions to protect corals that include establishing no-take zones, restoring natural watersheds, planting trees to prevent sediment run-off, and supporting projects that cultivate corals. He recognized the importance of the partnerships in the USCRTF that connect states and territories with federal agencies.

Governor Ige:

Governor Ige stated that reefs are important for the many ecological, cultural, and ecological benefits they provide. The corals of Hawaii have an estimated value of \$360 million/year to the state with a total economic value in the billions when ecological services are included. Tourism is at the 5th record high year in a row. Governor Ige recognized that climate change, sedimentation, and overfishing are a portion of the threats to coral reefs, and that action is needed to address these threats. He said that Hawaii established a 30 by 30 Marine Initiative in the 31st International Coral Reef Initiative (ICRI) meeting in Hawaii, the goal of which is to manage 30% of Hawaii's marine waters by 2030. He mentioned the key role all stakeholders, and encouraged engagement of everyone who has a role with coral reefs.

Attorney General Ale:

Attorney General Ale relayed a three-fold message from Governor Lolo Matalasi Moliga. First, he expressed gratitude for the USCRTF as a mechanism for having their voice be heard. The USCRTF has collaborated with American Samoa in training agents to prosecute those damaging the coral environment, monitoring coral bleaching, and working on projects to reduce the starfish crown-of-thorns problem. The second message was to express concern that government regulation is inhibiting the cultural practices and use of coral benefits by local people. Third, he asked for aid from the USCRTF. He asked for cooperation, recognition, and aid from the federal agencies regarding the governmental regulations in place (as referenced above). Finally, he also asked for the help with the removal of a grounded vessel that has been sitting on the reef for the past 2 years and is causing damage to reefs during storms.

All Islands Committee report:

The U.S. All Islands Committee (AIC) reported their updates, priorities, and accomplishments since the last meeting. The Coral Fellowship Program is in its second year, and work ranges from monitoring water quality to engaging the public. The AIC recognized the past efforts of the Task Force in the program and requested further involvement in keeping the program running. The AIC has revived efforts to reauthorize the Coral Reef Conservation Act (CRCA). Training and surveillance of tools for enforcement is ongoing in the Pacific, and there is talk of bringing the training to the Atlantic.

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Accomplishments include:

- American Samoa observed no new crown-of-thorns outbreaks, improved STEM classes, and held enforcement training.
- The Commonwealth of the Northern Mariana Islands (CNMI) had a ship grounding settlement with compensatory funds for the reef to remove the vessel, and continues the watershed restoration project with volunteers logging over 4,000 hours.
- Florida had a coral disease outbreak in Biscayne National Park, and samples of the diseased coral have been taken for analysis. There was also a coral injury settlement from when a cable was dragged and caused coral injury.
- In Guam, bleaching recovery surveys and quantitative coral reef assessments were performed and the Guam Coral Bleaching Response plan was finalized
- Vetiver plantings for controlling erosion occurred in Hawaii, and future work will include emptying sediment dams and stabilization projects.
- A study was recently completed in Puerto Rico on recreational uses and behaviors, and an updated section of the website includes a new interactive map with illustrations of coral monitoring stations.
- The U.S. Virgin Islands launched the Stewards of the Reef, and the Green Cay Gut Stabilization project was completed and is projected to reduce sediment input by 22% for an important tourist area.
- Federal States of Micronesia completed drafts of climate change adaptation plans and Total Ecosystem Valuation fieldwork.
- The Republic of Marshall Islands recently updated their biological dataset, and management plans were created and are under review for Reimaanlock. There is a National Oceans Symposium being organized focused on sustainable fisheries, marine pollution, marine protected areas, and climate change.
- The Republic of Palau performed coral monitoring surveys that will contribute to their long-term dataset, and are studying coral recruitment strategies.

The AIC thanked the USCRTF for its support and partnership and looks forward to future collaboration. The AIC expressed sorrow at the loss of their colleague Carey Morishige Martinez and presented a posthumous award in her honor.

Steering Committee Update:

The steering committee provided the following updates:

- The Watershed Priority Initiative watersheds have continued their work and the Working Group is developing a toolkit to help the watersheds define their social metrics.
- The USCRTF is releasing the Handbook on Coral Impacts: Avoidance, Minimization, Compensatory Mitigation and Restoration (below).
- A new lead was identified for the Coral Reef Conservation Act (CRCA) working group, which will be divided into a Federal and non-Federal group.
- The Education and Outreach (ED&O) Working Group is focused on enhancing the image and brand of the USCRTF, creating a messaging platform to include

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- a website update, and developing plans for the 2018 International Year of the Reef.
- The Enforcement Working Group developed a list of potential work products and developed workshop ideas for the Florida meeting.
 - Additional action items include planning and developing content for the next USCRTF meeting in Florida, the desire for coordination of the Sunia Internship, and development of transitional material such as briefings.

The Steering Committee has no items for adoption this meeting due to the change in administration and staff, but will continue to work on the items outlined in Resolution 34.1. Co-Chair Russell Callender would like to participate with the Steering Committee in creating materials for new staff.

Presentation: Rollout of the USCRTF Handbook on Coral Reef Impacts:

Cindy Barger (Office of the Assistant Secretary for the Army of Civil Works), Jennifer Koss (NOAA CRCP), Gerry Davis (NOAA NMFS), and Paige Rothenberger (Contractor), represented the USCRTF Injury and Mitigation Working Group in announcing the release of the USCRTF Handbook on Coral Reef Impacts. The handbook is not official agency guidance, and does not involve regulation, but is a compilation of definitions, legal authorities, best practices, and case studies for mitigation of unplanned and planned impacts to coral reefs. It will be a tool for proponents, responsible parties, and managers; for example, as a guide of the roles and responsibilities of agencies to ensure quick actions and smoother processes for avoiding and minimizing impacts. The release of the handbook is a deliverable of Resolutions 16.7 and 25.1. Next steps include the sharing of the Handbook internally and externally, a 5-year retrospective review, and updates as necessary. The Department of State requested to share the Handbook with their international partners through USAID and UN meetings, and other agencies offered their congratulations, support, and excitement to share the document.

Presentation: Coral Restoration – why we should be hopeful:

Dr. Luis Solorzano, Executive Director of the Caribbean Division of The Nature Conservancy, talked about the hope for coral conservation. He explained that the Caribbean is home to over 41 million people, 70% of whom live on the coast, and are dependent on tourism as accounting for about 15% of regional GDP. He said that value from corals that are at risk in the Caribbean due to significant beach erosion, fishery collapses, and loss in coral cover. While acknowledging these challenges, Dr. Solorzano recognized the great scientific momentum around coral reefs and the goal of The Nature Conservancy and Mote Marine Laboratory to plant 1 million corals by 2025. He stated that the project relies on the effectiveness of restoration strategies including in-water nurseries, land-based nurseries, microfragmentation, and increased coral sexual reproduction for greater genetic diversity. He encouraged the variety of techniques, genotypes, species, and communities of corals for protecting biological diversity given the uncertainty of future conditions. He mentioned the role that technology can play for assessment and monitoring

projects. He also talked about the work with NOAA and others in catalyzing the Coral Innovation Network, which will bring together leading scientists and entrepreneurs to restore resilient reef systems.

Coral Bleaching Report:

Mark Eakin (NOAA) gave the coral bleaching report from 2014-2017. He said that the global bleaching event began in 2014 and escalated through 2016 due to record high temperatures 3 years in a row. The bleaching area included Guam, CNMI, Marshall Islands, Florida, and Hawaii, and is the longest global bleaching event. Half of the areas that were affected (i.e. bleached) were bleached twice, and 100% of reefs in the world were stressed. In 2017, there is potential for more bleaching in American Samoa in the southern hemisphere, but the potential in the northern hemisphere is unknown because we seem to be in a new regime (i.e. there are unusual patterns of warm water across the Pacific, characteristic of an El Nino, despite being in neutral ENSO conditions). Mark Eakin then talked about Chasing Coral, a production in which he played a role as a science expert, and the plans to shown the film in a public setting in the Florida meeting. He also mentioned 50reefs.org, a new effort supported by several foundations that will pick sites around the globe to bring national attention for preservation. He mentioned updates for the work of the Climate Change and Ocean Acidification Working Group and their focus on local management, communication, and creation of USCRTF climate change projects. He talked about the Corals and Climate Adaptation Planning Project that the Working Group created along with its Adaptation Design Tool. He said that the tool has been tested and will be featured in May 2017 at the National Adaptation Forum and in a Caribbean workshop.

Public Comment:

Dan Clark – Cry of the Water:

Dan has been attending the Task Force meetings for over the past 15 years and advocated for the identification of the cause and spreading mechanism of the coral disease in Florida. He encouraged a new monitoring program to better capture with the reefs at a greater spatial scale and temporal frequency. He said that boats anchor over a 3 day period and cause destruction in an area of Florida that is not in a marine sanctuary, and asked the government to enforce the management put into place. He asked for funding for Disease Consortium, and additionally for a cost-benefit analysis of the Port Everglades project considering its destruction of valuable coral ecosystems via sedimentation.

Stephanie Pravata-Clark, Cry of the Water:

Stephanie Pravata-Clark expressed distress at the die-off of corals in Florida from disease, and Port of Miami dredging that resulted in burial of coral transplants. She asked for concern about the proposed Port Everglades project that may require 5 years of dredging. She also identified a beach project from truck sand in Ft. Lauderdale with concerns of possible contaminants of the sand due to the recent disease outbreaks. She expressed support for the ED&O Working Group and mentioned the past partnership of Cry of the Water and the Working Group.

Wendy Wood-Derrer, Nova Southeastern University (National Coral Management Fellowship):

Wendy provided an update for the second year of the fellows from the National Coral Management Fellowship. She mentioned that there is year 2 training that will be occurring in March with site visits organized to show on-the-ground management. Current fellows are working on improving storm water understanding and outreach, assessing the Coral Reef Monitoring Program, expanding economic and outreach capacity, and monitoring water quality. Two of the fellows had left the program, one due to personal reasons with a new fellow filling the vacancy, and the other take a full-time job in the region. She showed a timeline suggested for the 2018 to 2020 fellowship. She thanked the Task Force for the opportunity of Nova Southeastern University to facilitate the fellowship.

ICRI 31st Annual General Meeting Report Out:

Christine Dawson (Department of State) reported on the International Coral Reef Initiative (ICRI), which was founded in 1994 and promotes international partnership for preserving corals. The themes of the ICRI Plan of Action 2017-2019 are compatible with the U.S. priorities and include 1. Raising awareness of how coral reefs and related ecosystems help to fight climate change 2. Meeting international requirements regarding coral reefs 3. Helping to reduce human threats to corals and associated ecosystems 4. Monitoring the state of reefs for better management 5. Progress via education. Christine Dawson highlighted the International Year of the Reef 2018 and the role the U.S. can play. Britt Parker (NOAA) talked about the Global Coral Reef Monitoring Network (GCRMN) that has produced past global reports and more recently has encouraged regional assessments and networks in the Caribbean (2014), Pacific and Western Indian Ocean (underway), and Eastern Tropical Pacific and SE Asia (beginning). A resolution on the GCRMN was passed in the ICRI General Meeting 31.

Presentation: Flood Protection Savings Provided by Coral Reefs:

Dr. Mike Beck (The Nature Conservancy and the University of California Santa Cruz) talked about the flood protection savings provided by coral reefs. He mentioned that coral reefs can minimize risks by reducing up to 97% of wave energy, and the resulting value may provide further funding opportunities for green infrastructure methods. Dr. Beck was involved with the publication of *Managing Coasts for Natural Solutions* that contained guidelines for measuring and valuing coastal protection services from mangroves and coral reefs. He spoke broadly of the guideline methods for estimating offshore and nearshore waves, the effect of habitat presence, the extent of flooding, and storm frequency. He said when a 1 meter decline in coral reef height from present height was modeled, the projected cost of storms doubled overall, and tripled in areas with more storms in the 1 in 10 and 1 in 25 year frequency ranges. Dr. Beck showed the annual expected benefit of reefs for flood protection is \$94 million/year for U.S., and mentioned the application of high-resolution reef protection analysis in local areas. He encouraged the Task Force to

think of new approaches for funding that incorporate the value of coral reefs and green structures in flood protection.

Presentation: Harnessing Basic Science to Advance Solutions for Coral Reefs:

Dr. Ruth Gates, Hawaii Institute of Marine Biology, started by saying science tells us rates of environmental change are outpacing the innate capacity of corals to adapt, especially given that they are ancient organisms. She highlighted that stress responses are highly variable at all scales (within species, between species, across reefs, and between reefs) that reflect differences in genetics, symbionts, and environmental history. Dr. Gates suggested the approach of assisted evolution to selectively breeding corals by accelerating naturally occurring evolutionary processes. Supported by the Paul G. Allen Family Foundation, Dr. Gates selectively bred corals that survived 2 coral bleaching events, created new coral-symbiont combinations, and manipulated environmental experience for increased acclimatization through exposure. She said that the assisted corals could be used to restore damaged reefs, re-connect fragmented reefs, and increase resilience of vulnerable reefs. Dr. Gates addressed concerns colleagues have regarding designer reefs, unnatural selection, and genetic narrowing. Dr. Gates argued that the risk of doing nothing outweighs the risk of doing these actions, which are based on rigorous science and are a furthering of what nature does naturally and do not involve genetic modification. She explained that her group is changing the way business is done by using a team focus and transparently reporting both successes and failure. Looking forward, her 5-year goal is to have a proof of concept, greater acceptance from stakeholder groups, and the ability to translate progress to other areas.

Update on 38th USCRTF in Florida:

Joanna Walczak (Florida Department of Environmental Protection) announced the 38th meeting in Ft. Lauderdale August 7th – 11th. She said that the Florida meeting will highlight the different values of the coral reef ecosystems in the area with discussions on balancing economic, ecological, and stakeholder values.

Summary of Action Items:

1. Governor Calvo, Governor Ige, Attorney General Ale ask the Task Force to address local issues on the ground
2. The AIC asks the Task Force to engage with fellowships and Sunia Internship
3. Continue to Implement 34.1
4. Find a place to host Watershed Partnership Initiative metric data
5. Create Federal CRCA Working Group
6. Support ED&O Working Group
7. Continue to hone in on enforcement needs and create products
8. Update website (www.coralreef.gov)
9. Help plan the next meeting in Florida
10. Develop transition materials
11. Request to reach out to DOT to fill vacant seat on Task Force
12. Find more information regarding coral mitigation banks

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13. Share the Handbook on Coral Reef Impacts: Avoidance, Minimization, Compensatory Mitigation, and Restoration
14. Identify opportunities for people to provide comments on the Handbook and establish a place to collect the feedback
15. Seek ways to provide assistance with the vessel grounding in American Samoa
16. Assist with Florida disease outbreak, particularly by identifying methods for increasing emergency response capacity

The U.S. Coral Reef Task Force was established in 1998 to lead U.S. efforts to preserve and protect coral reef ecosystems. It includes leaders of 12 Federal agencies, seven U.S. States, Territories, Commonwealths, and 3 Freely Associated States