



# Report of the U.S. All Islands Coral Reef Committee

U.S. Coral Reef Task Force

Washington, D.C.

February 21, 2013

## INTRODUCTION

The **U.S. All Islands Coral Reef Committee (AIC)** is a collaboration of marine resource managers from state, commonwealth, territorial agencies and freely associated states working together with federal agencies to conserve and protect coral reefs in the United States.

The Committee was established in 1994 by the governor-appointed Points of Contact (POCs) from the U.S. states, territories and commonwealths of American Samoa, Commonwealth of the Northern Marianas, Guam, Hawai'i, Puerto Rico, and the U.S. Virgin Islands. The State of Florida joined the Committee later. Affiliate Members of the AIC include the freely associated states of the Federated States of Micronesia, the Republic of the Marshall Islands, and the Republic of Palau. The AIC was recognized as a key element of the overall U.S. Coral Reef Initiative in the Presidential Executive Order 13089 which established the U.S. Coral Reef Task Force (USCRTF) in 1998.

The AIC provides leadership for and coordination of strategic initiatives to strengthen the conservation and protection of coral reef ecosystems in the United States. The AIC implements policies and initiatives to conserve and protect coral reefs, and forms partnerships that strengthen stewardship of U.S. coral reef ecosystems.

**U.S. All Islands Coral Reef Secretariat**, based in Honolulu, was established in 2002 to provide policy support and coordination for the Committee's participation in the U.S. Coral Reef Task Force. With funding from the USCRTF, the Secretariat is a collaborative initiative that helps the jurisdictions to coordinate coral reef conservation initiatives with federal agencies and non-governmental partners.

## REPORT TO THE 29<sup>TH</sup> MEETING OF THE CORAL REEF TASK FORCE - WASHINGTON, D.C.

**Hafa adai, Talofa, Aloha, Hola and Good Day** - 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 since we last met in American Samoa in August 2012.

We welcome new Task Force members Governor Lolo M. Moliga of American Samoa and Governor Alejandro García-Padilla of Puerto Rico and look forward to working with both governors on the conservation and protection of coral reefs. We also welcome Carmen Guerrero, Secretary for Puerto Rico's Department of Natural and Environmental Resources.

We are pleased to announce that Damaris Delgado, POC for Puerto Rico, is the newly elected Vice Chair of the AIC.

We would like to express our gratitude to Paige Rothenberger for serving as POC for USVI and AIC Vice Chair for the last 2 years, and wish her well in her future endeavors.

We welcome Jean-Pierre Oriol, the new POC for the US Virgin Islands and look forward to his contributions to our efforts to conserve and protect coral reefs.

We also welcome Emma Anders as the new POC for Hawai'i and express our thanks to the previous POC, Dr. Robert Nishimoto.

As this will be her last USCRTF meeting as Executive Director of the AIC Secretariat, we also thank Dr. Takiora Ingram for her leadership and service.

## NATIONAL OCEAN COUNCIL, REGIONAL OCEAN PARTNERSHIPS

**Pacific Regional Ocean Partnership (PROP)** - The Governors of American Samoa, CNMI, Guam and Hawaii signed the Pacific Regional Ocean Partnership (PROP) Agreement in August 2012. The main objectives are to:

- Identify coastal and ocean management priorities that require coordinated regional response and increased collaboration.
- Promote regional sustainability of resources and coordinate regional priorities.
- Enhance state, regional and federal governance and institutional mechanisms to manage ocean and coastal resources.

Since that time, the PROP Steering Group held a planning meeting in October 2012 and identified two priority areas for the PROP Action Plan:

- Develop strategies for resilience and adaptation to climate change impacts on natural resources.
- Develop strategies for resilience and adaptation to climate change and disasters for coastal communities.

CMSP Regional Planning Body nominations from the four governors were submitted to the National Ocean Council (NOC) in December 2012.

PROP has hired a Coordinator under the ROP Phase 1 grant, with the University of Hawai'i as fiduciary.

A Regional Ocean Partnership (ROP) III funding proposal was submitted by PROP to NOAA last week, and the PROP Steering Group will meet on February 23 in Washington D.C. to further develop the Action Plan.

**Caribbean Regional Ocean Partnership (CROP)** - The Governors of Puerto Rico and U.S. Virgin Islands signed the Caribbean (CROP) MOU in February 2012.

The Nature Conservancy (TNC) is serving as fiduciary on ROP Phase I grant award to support the development of the CROP. To date, two (2) ROP Coordinators have been hired and placed within the local management agencies (DPNR and DNER) in the USVI and Puerto Rico.

A series of meetings has been held to discuss current uses of the region's coastal and marine spaces, identify issues, concerns and recommendations for sustainable use of these areas and the resources within them, and develop a formal partnership agreement and work plan. The Governors of the USVI and Puerto Rico submitted the names of RPB members to the NOC in December. CMSP training and a data managers meeting are planned for March 2013.

The CROP through TNC submitted a proposal for ROP Phase III funding which will support implementation of the regional work plan, CMSP activities and development of a regional data portal.

### **PACIFIC LEADERS STATEMENT ON CLIMATE CHANGE AND CORAL REEFS**

The Micronesian Chief Executives endorsed a consensus statement on the implications of climate change on coral reefs in March 2012. As a result, the CNMI has established a climate change working group to address adaptation and mitigation.

A similar resolution and statement on climate change was endorsed by the Polynesian Leaders Group (American Samoa, Cook Islands, Niue, Samoa, Maohi Nui-French Polynesia, Tokelau, Tonga, and Tuvalu) at their meeting in the Cook Islands in August 2012.

The statements call on the global community to take the climate change threat seriously, and requests nations making large contributions to greenhouse gas emissions to put in place policies and measures that will not only curb the increase in emissions, but ultimately result in a significant decrease of greenhouse gases in our atmosphere and oceans, and provide sufficient technical and financial support to our islands for adaptation and mitigation initiatives.

### **PROPOSED ENDANGERED SPECIES ACT (ESA) CORAL LISTING**

On December, 7, 2012, NOAA Fisheries proposed Endangered Species Act (ESA) listings for 66 coral species: 59 in the Pacific and seven in the Caribbean.

- In the Pacific, seven species would be listed as endangered and 52 as threatened.
- In the Caribbean, five would be listed as endangered and two as threatened.

In addition, NOAA is proposing that two Caribbean species—elkhorn and staghorn corals—already listed under the ESA be reclassified from threatened to endangered.

The primary reasons for the predicted decline in available habitat for the species are climate change and associated impacts rising sea levels and surface temperatures, as well as ocean acidification.

The AIC also recognizes the tremendous threat that climate change poses to the health of coral reef ecosystems and the very existence of many human communities throughout the world; yet, while thinking globally we are acting locally. The primary threat, climate change, is being driven mainly by carbon and other greenhouse gas emissions. It is clear that immediate global scale efforts are needed to manage carbon emissions. However, simply listing these species under the ESA is not likely to result in a meaningful change in collective human consumption or a reduction in global carbon emissions. As we mentioned previously, we do not think it is the right tool for managing corals with respect to the risks of climate change.

Also, much of the U.S. coral reef habitat is within the local jurisdiction coastal zone and this could require all development in the coastal zone to complete a section 7 consultation with NMFS. This would create a tremendous burden to the jurisdictions and the public, with little to no ability to reduce the target threat, climate change. A listing also has the potential to significantly limit or eliminate science that is essential to the best management actions for coral reefs and important recreational and cultural activities that foster a sense of appreciation and stewardship for these resources.

The AIC expressed our concerns in a letter to NOAA/NMFS in 2012. We have also expressed similar concerns in a letter to the Center for Biological Diversity and asked for a meeting with them to address the concerns raised. We have had no responses to these letters.

In addition, the Governors of American Samoa, CNMI, Guam and Hawai'i co-signed a letter to Dr. Rebecca Blank, Acting Secretary and Deputy Secretary, U.S. Department of Commerce, and Dr. Jane Lubchenco, requesting that NOAA consider another route to protecting coral species, through the re-authorization of the Coral Reef Conservation Act of 2000. The Governors have not yet received a response to this letter.

## GOVERNOR SUNIA SUMMER INTERNSHIPS

The AIC would like to express our appreciation to DOI/OIA and USFWS for hosting the Governor Sunia Summer Internships for 2013. We also wish to acknowledge the work of the 2013 Sunia Internship Team:

- Team Leader, Silmarie Padron, USFWS-HQ, Nikki Lamp, USFWS-Region 4 (Atlanta) and Jennifer Higashino (Maui)
- Sharon Sawdey of USDA/NRCS in Hawaii and Edwin Almodovar in the Caribbean region
- Tova Callender, NFWF in Hawaii

- USCRTF Steering Committee Co-Chair Liza Johnson
- Karen Koltes, DOIA/OIA
- Kristine Buccianeri, American Samoa
- Takiora Ingram, AIC Secretariat

This is an excellent example of key steering committee members working in partnership to improve and revitalize this important initiative to build capacity in the jurisdictions. We encourage other federal agency partners to support the partnership in future years.

## THE MICRONESIA CHALLENGE AND CARIBBEAN CHALLENGE

The MC Regional Sustainable Finance Plan/ Fundraising Strategy was endorsed by the Micronesia Chief Executives, and now the Micronesia Conservation Trust, in coordination with the MC Steering Committee is submitting a proposal to AusAID for development of a concise, compelling MC Business Plan for fundraising efforts.

The MC endowment continues to grow, and is currently at nearly \$12M.

Baseline for four regional marine indicators currently collected in all jurisdictions, and a Marine Protected Area Management Effectiveness tool has been tested, adopted, and is currently being implemented in priority sites in all jurisdictions.

The MC monthly newsletter now reaches 25,000 subscribers. A region-wide Rare Campaign cohort focused on MPAs and watersheds launched with 11 campaigns total. The Green Fee in Palau continues to generate substantial funding for their Protected Areas Network (approximately \$1.5M per year). Train-the-Trainers Community Adaptation Toolkit Workshops have been conducted in nearly all jurisdictions, with one planned for the CNMI in March.

At least 6 new site-based management plans have been finalized and endorsed by community / government leadership. Priorities for 2013 and beyond include:

- Implementation of MC Regional Sustainable Finance Plan
  - Work to fully capitalize the MC endowment at ~\$58M
  - Implement local income-generating mechanisms in each jurisdiction
- Marketing / Communications
  - Completion of MC Communications Plans
  - Conduct the 2<sup>nd</sup> MC Communications working group meeting
  - Continue to implement the “One Micronesia” Marketing Campaign
- MC Measures
  - Pilot a “Monitoring for Decision Support” framework using Marine indicators
  - Test a suite of Socio-Economic and Terrestrial indicators and methods for adoption

**Caribbean Challenge Initiative (CCI)** is making great progress. The Caribbean Biodiversity Fund (CBF), a sustainable finance mechanism for the CCI, has now been formalized and will soon have \$42M+ to initially invest, including \$8M from TNC. Ten governments are currently participating in CCI: Antigua & Barbuda, Bahamas, British Virgin Islands (BVI), Dominican Republic, Grenada, Jamaica, Puerto Rico, St. Kitts & Nevis, St. Lucia and St. Vincent & the Grenadines. Additional countries and territories are expressing interest in joining the initiative. Efforts are underway in all of the CCI jurisdictions to establish national and territory trust funds that could be eligible to receive CBF funding. Nearly 50 new marine/coastal protected areas were declared across the participating countries and territories.

Important upcoming CCI events include:

- A Senior Officials Meeting (SOM3) and the first meeting of Ministers will be hosted by the Secretary of the DNER in Puerto Rico in March, 2013.
- A Political and Business Leaders Summit will be held in the BVI in May 2013 to launch a second phase of CCI which is expected to more actively engage the private sector and civil society, expand the scope of country commitments beyond MPAs to a wider range of issues and involve a larger number of Caribbean countries and territories. The Summit is being co-hosted by Prime Minister Tillman Thomas of Grenada, Premier Orlando Smith of the BVI and Sir Richard Branson (CEO, Virgin).

## UPDATES FROM CORAL JURISDICTIONS

### **American Samoa –**

*Faga'alu:* Since the USCRTF meeting in American Samoa, the Community of Faga'alu has been actively working to do their part to restore the watershed. They are working closely with local agencies to implement the goals developed in the Community Based Watershed Management Plan, including recycling and trash programs. Local and Federal Agencies are working to implement appropriate programs in the watershed as well as working with the Quarry ownership to implement environmental best practices.

*Crown of Thorns Outbreak:* In recent months, American Samoa has noted an alarming number of Crown of Thorns Starfish in some reef areas in the Territory. Currently, COTS are present on the south side of Tutuila in outbreak numbers. Local agencies are working together to respond to this threat to our reefs. The Assessment and Rapid Reef Response Plan has been activated in American Samoa, and the Coral Reef Advisory Group is coordinating efforts to survey territorial waters and also to coordinate COTS removals. The territory is actively working to manage this threat, but knows this will be a long term risk to coral reefs.

*Jurisdictional Capacity Assessment Implementation:* American Samoa is working to implement recommendations from the Jurisdictional Capacity Assessment. The Coral

Reef Advisory Group is working with local agencies to prioritize and obtain funding for many of the suggestions to improve local capacity.

*Reef Resilience:* American Samoa is in the planning stages with Samoa, with support from TNC and SPREP to hold a Reef Resilience Workshop in August. This week long workshop will bring together participants from the entire Archipelago to discuss resilience and MPA design to support better management in the face of climate change. They are also working on creating community based Reef Resilience outreach materials, to be presented by various agencies, to ensure a broad audience is reached. These materials include village presentations, radio ads, school visits and other awareness raising events.

*Marine Science Center:* American Samoa's Marine Science Center is currently in the Design Phase, with Architects and Engineers working on a LEED certified building to support the needs of the territory. Upon completion, we hope this Center will be a hub of coral reef and climate change research in the South Pacific.

**CNMI** - The Climate Change Working Group is a dynamic task force composed of participants from 34 agencies and organizations. The Working Group first convened in June, 2012, to lay a strategic foundation for climate change adaptation planning in the CNMI. The group is identifying CC risks and areas that are vulnerable to the effects of climate change, including sea level rise, changes in precipitation, and rising sea surface temperatures. The group is using this assessment for public education and to inform adaptation planning efforts. A draft CC risk and vulnerability assessment for Saipan will be available in September, 2013, highlighting exposed coastal infrastructure and sensitive marine and terrestrial ecosystems.

**Florida** - Last August, State scientists observed male and female pillar corals spawning together following the two full moons of the month at a site in the Upper Florida Keys. To the best of our knowledge, this is the first observation of both males and females from the same reef spawning together.

Pillar coral is one of the species currently being considered for listing as endangered under the Endangered Species Act. Although only 50% of colonies released the first night, and only 10% released the second night, documentation of the simultaneous spawning suggests Florida's population is capable of sexual reproduction. However, a lack of juveniles observed in monitoring programs suggests either recruitment failure or poor post-recruitment survival is contributing to the population's demise.

Future management efforts will attempt to determine the location of all Pillar coral colonies across the Florida Reef Tract in order to better understand their current densities, as well as to start fate tracking monitoring.

In January 2013, the Florida Reef Resilience Program announced the completion of "The Florida Reef Tract Bleaching Response Plan". The plan outlines strategies for predicting, assessing, and communicating about coral bleaching events including coordinating efforts across local, state, and federal agencies, academic institutions, and

non-governmental organizations, in preparation for, and response to, Coral Bleaching Events across the Florida Reef Tract.

While these strategies do not provide a “cure” or “solution” to coral bleaching, they will strengthen overall coral reef management by raising awareness and advancing scientific understanding about coral reef resilience to bleaching – including reef managers’ ability to develop and communicate reliable information about the likelihood and impacts of a bleaching event.

Finally, Florida’s Local Action Strategy (LAS), the Southeast Florida Coral Reef Initiative (SEFCRI) is preparing a stakeholder-driven process to develop recommendations on management options for the region’s coral reef ecosystems.

Results of previous LAS projects, as well as other relevant data and information, are currently being compiled into accessible and easy to use tools for stakeholders. Additionally, outreach and communication efforts are being expanded in order to draw attention to the ongoing efforts of SEFCRI. In May and June of this year, public meetings will be held to “rollout” the results of the LAS projects, explain the steps in the management options identification process, the anticipated timeline, and how stakeholders can be involved throughout each of the steps.

Following the first public meetings, SEFCRI will recruit stakeholders to fill regional working groups. Over the next year, these stakeholder working groups will identify perceived threats to the region’s coral reefs; learn about user conflicts, scientific research, and resource management efforts in the region; and finally develop and prioritize management recommendations to help protect and restore southeast Florida’s coral reefs.

**Guam** continues to work with community groups on watershed restoration work. Stronger relations are being developed with the Mayors of the villages of Piti, Asan, Umatac, Merizo and Agat and several conservation NGOs including Marianas Resource Conservation and Development Council, Ayuda Foundation and the Humatak Foundation. NGOs are building rain gardens, planting trees, developing innovative stream bank stabilization techniques, monitoring sedimentation flows.

NOAA Fisheries Pacific Island Regional Office (PIRO) is partnering with local natural resource agencies to teach the community about simple monitoring techniques to assist with coral reef monitoring.

Long Term monitoring has increased to include additional sites in Piti, analysis has begun for the 2 year data set for Tumon and East Agana and new sites are also being added for southern Guam priority watersheds of Achang Bay and Fouha Bay .

Guam has started working on the marketing efforts for the Micronesia Challenge. This includes developing a communication plan for Guam. *Ta Na Maolek Mona...Pay it forward...*The marketing efforts will complement the regional *One Micronesia*

*Campaign.* This effort will include many partners. The communication plan is being drafted and is expected to be completed by the summer of 2013.

Climate Change projects continue with the partnership with the University of Guam. The projects focus on the Staghorn Corals including mapping and collecting DNA samples for determining connectivity and additional monitoring, and looking at innovative ways to address coral reef restoration.

**Hawai'i** is finalizing planning and continuing implementation at both priority sites: South Kohala (Hawai'i Island) and Wahikuli-Honokowai (west Maui). We hope to hire a Coordinator for South Kohala this spring and are continuing to work with our community advisory group to refine the scope of work.

West Maui has completed the Wahikuli-Honokowai Watershed Management Plan and the launch of the West Maui Ridge to Reef Initiative which will see management planning for 3 additional watersheds as well as collaborative stewardship across the region. This initiative is a partnership between the State of Hawaii and the US Army Corps of Engineers with strong support from Task Force federal agencies and NGO's. Public engagement and implementation of land-based pollution control projects are underway with a regular newsletter and website to keep stakeholders and community members abreast.

In both areas, our projects to implement erosion and sediment controls on private lands have slowed down due to a need to obtain legal assurance from landowners that the BMP's will be maintained, but we are confident that the great work and support provided by local NOAA staff will allow for more speedy installation in the future and greater public confidence in our efforts.

Our current administration has been very supportive of our community-based stewardship efforts and, with support from private foundations, we are growing our capacity to support the Makai Watch program and implementing Community-based Subsistence Fishing Areas. The first program guides community groups in providing environmental outreach, accurately observing and reporting fishery violations, and conducting monitoring. The latter provides a community-driven mechanism for developing and adopting new fishing rules.

Although we did experience a disease event in Kauai last year, our Rapid Response Contingency Plan was mobilized to pilot on-site remediation as well as monitoring of the reef. The Montipora banded tissue loss appears to have slowed, but we will continue to monitor as winter conditions subside.

Additionally, the Papahānaumokuākea Marine National Monument is beginning a 5-year management plan review and the Hawaii Humpback Whale National Marine Sanctuary is in the end stages of its management plan review. The State will be considering even stronger rules to protect stony corals which are already protected from harvest, and is developing a comprehensive mitigation program to address planned and unplanned

damages to coral reef ecosystems. We have benefitted from great communication with our federal partners in these efforts and have adopted regular meetings to keep the dialog consistently open.

**Puerto Rico** - Isla Verde Marine Reserve, the first urban marine reserve, was designated on September 2012 by Law 274. A management plan will be drafted and a co-management agreement with an NGO, Arrecife Pro Ciudad, is expected to be formalized for the conservation of the marine reserve.

The Third Conference Cycle on Marine Spaces, a public awareness initiative, was held on October, and included 3 presentations on coral reefs.

Ranger Julio Vargas represented PR at the first Global MPA Enforcement Conference in San Francisco in November 2012, sponsored by the TNC-NOAA Cooperative Agreement. Vargas learned about enforcement strategies that have been successful in other countries and will share this information with DNER Rangers to improve protection of MPAs.

Focus group interviews were conducted with commercial fishers in Puerto Rico. The outcomes include the identification of commercial fishers priority needs, their concerns and willingness to collaborate with fishery managers.

A Fishery Managers Workshop brought together representatives from federal and state government agencies to discuss current challenges and priority fishery management issues. This included the heavy impact of recreational fishers who do not follow fisheries regulations and sell the fish caught, which is not documented. Enforcement was identified as vital for fisheries protection.

The ship, Jireh , which was grounded in the Mona Natural Reserve last year has been removed and primary restoration of coral has started. Also, coral restoration from the Guayanilla grounding continues.

A presentation on coral reefs was given to the association of barge pilots from the south region (Comisión del Sur) in October 2012. This is a DNER initiative to promote coral reef protection from commercial vessels approaching Puerto Rico's coasts. DNER met with barge pilot leaders to identify and establish a commercial anchorage area in the south of Puerto Rico to prevent damage to the reefs. The Coast Guard has welcomed this initiative.

**USVI** – Acknowledging the power of MPAs to conserve and restore marine resources, the USVI' reliance on these resources to support our quality of life and the need for increased collaboration to effectively meet the challenge of protecting these vital resources and our future, the VI Marine Protected Areas Network (VIMPAN) was created. TNC received a MPA Fund grant from NFWF to facilitate the process of creating a sub-regional MPA network framework for VIMPAN. Member MPAs include both federal and territorial managed MPAs that belong to the National MPA system. Resource managers participated in a series of regional meetings to develop shared goals, objectives and priorities to increase communication, coordination and

collaboration among MPAs, maximize efficiency and effectiveness, address targeted issues of mutual concern in a coordinated and cohesive manner, and reduce confusion surrounding MPAs and marine management. VIMPAN has drafted a Memorandum of Agreement (MOA) to formalize the group's collaboration. This MOA serves as a catalyst for achieving a new level of territorial coastal and ocean resource management. Next steps for VIMPAN include developing implementation plans for shared priorities and finalizing a network identity including a website and logo.

Locally-appropriate Best Management Practices (BMPs) aimed at reducing erosion, sedimentation and LBSP conceived and implemented in Coral Bay, St. John are resulting in notable water quality improvements. As a result of EPA STAR and NOAA ARRA funding, 18 priority projects identified in the Coral Bay Watershed Plan were implemented. A total of 47 new BMPs were installed in the watersheds above Coral Bay to mitigate prioritized sources of eroding sediments and contaminants. BMPs installed include paving of highly-erodible road surfaces, sedimentation ponds, storm water swales, gut restoration and reforestation of native vegetation. Quantitative sediment monitoring both in the watershed and in the Bay is underway, however, qualitative monitoring indicates that the BMPs are effectively reducing LBSP inputs associated with upland runoff and significant water quality improvement in Coral Bay are being realized. These strategies will be transferable to other areas in the USVI and other island jurisdictions that are struggling to address LBSP impacts. Next steps in this USVI priority geographic area include revision of the watershed management plan and continued implementation of priority strategies to improve the health of coral reefs.

## CONCLUSION

### The Committee:

- Welcomes Governor Lolo and Governor Alejandro García-Padilla as new members of the USCRTF and we look forward to working with them on our coral reef management efforts;
  - Expresses our thanks to DOI/OIA, USFWS and USDA/NRCS for funding and hosting the Governor Sunia Summer Internships for 2013, and we encourage them and other federal partners to continue to support this important program;
  - Urges the USCRTF to continue support for the watershed partnerships over the longer term;
  - Encourages continued commitment to capacity building in the jurisdictions; and
  - Encourages the USCRTF to support the jurisdictions in managing coral reefs with proposed ESA listing of 66 species.
- Urges governors of the USCRTF to support the re-authorization of the Coral Reef Conservation Act of 2000.

**U.S. ALL ISLANDS COMMITTEE (POINTS OF CONTACT, AFFILIATE MEMBERS AND SECRETARIAT AND ADVISORS)**

**Points of Contact**

**Ms. Fran Castro, CNMI, Chair**  
**Ms. Damaris Delgado, Commonwealth of Puerto Rico, Vice-Chair**  
**Mr. Lelei Peau, Territory of American Samoa**  
**Mr. Joseph Cameron, Territory of Guam**  
**Ms. Joanna Walczak, State of Florida**  
**Ms. Emma Anders, State of Hawai'i**  
**Mr. Jean-Pierre Oriol, USVI**

**Affiliate Members (*apologies*)**

**Republic of the Marshall Islands**  
**Federated States of Micronesia**  
**Republic of Palau**

**Secretariat**

**Dr. Takiora Ingram, Executive Director**

**AIC Advisors**

**Mr. Gerry Davis, AIC Resource Advisor**  
**Dr. Michael Hamnett, AIC Policy Advisor**  
**Dr. Robert Richmond, AIC Science Advisor**