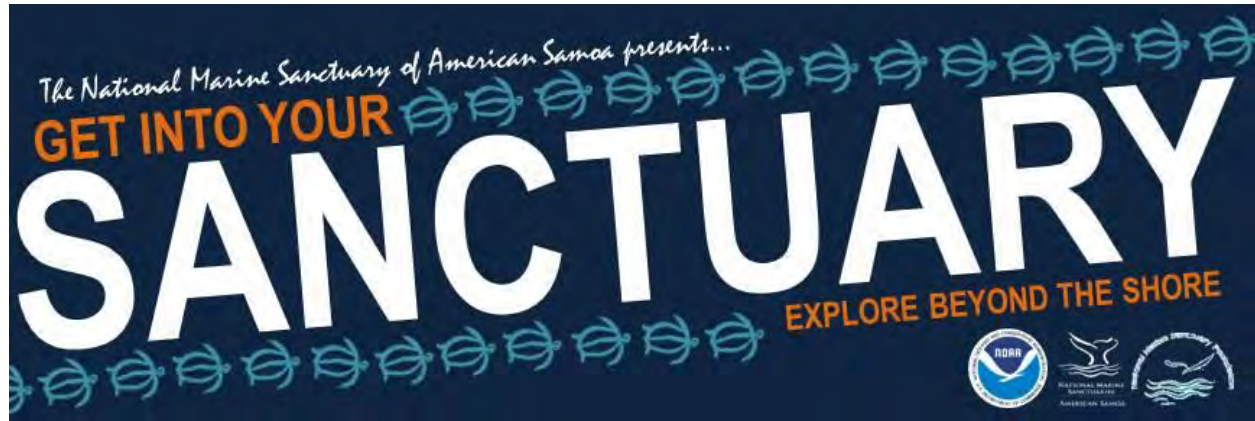


Sanctuary Update

NATIONAL MARINE SANCTUARY OF AMERICAN SAMOA
January-February 2015
(Addendum to 2014 Accomplishments Report)

Accomplishments

1) Cultural Heritage and Community Engagement



National Marine Sanctuary of American Samoa launches “Get Into Your Sanctuary!”

Campaign: The sanctuary team has been working with the village communities near sanctuary areas, schools, and members of the Sanctuary Advisory Council since November 2014 to introduce to American Samoa, “Get Into Your Sanctuary!” The sanctuary team has planned to dedicate 2015 to “Get Into Your Sanctuary” so that all six sites are highlighted, while summer programs are dedicated to school-age audiences. The campaign was launched on February 27, 2015 and will run through October.

Documenting the Coral Bleaching Event:

In order to document a heavily bleached area, a team from Catlin Seaview Survey came to the island in February to photograph the Airport Pools with the support of the sanctuary. The Research Coordinator assisted the team in the water. There was also a documentary film crew that is covering Catlin Seaview's efforts. The team deployed a time-lapse camera to document the progression of bleaching over the next month. All this information will be used for outreach on island and also for presentation of before/after photographs at international climate and policy conferences. Project Director Richard Vevers also presented to local officials, students, community members, and the media at the “*Get Into Your Sanctuary*” campaign launch event at the Tauese P.F. Sunia Ocean Center.

Catlin Seaview Survey Report:

Following the conclusion of a weeklong survey effort of the National Marine Sanctuary of American Samoa areas in December 2014, Richard Vevers, the project director of Catlin Seaview Survey, delivered a presentation at the Ocean Center that announced that in the past

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30 years, 40% of corals around the globe have been lost. The Catlin Seaview Survey "is a unique global study, working with some of the world's leading scientific institutions, dedicated to monitoring this change and communicating it to the world." One of the highlights of their survey was visiting some of the world's largest corals located in the Ta'u area of the National Marine Sanctuary of American Samoa. Several other projects were reported on as well: Kalewa Correa of the Papahānaumokuākea Marine National Monument reported on his work with Google Street View in the areas surrounding the Sanctuary areas; Sophie Ansel, Catlin Seaview Survey-Field Assistant demonstrated some media collected through drone cameras of Rose Atoll; And Christina Ogura from the U.S. Fish and Wildlife Service, reported on the regulations and condition of the Atoll itself. This project will produce an accurate record to monitor coral reef change over time, provide virtual dive and site experiences for people to Fagatele, Fagalua/Fogama'a, Aunu'u, Ta'u, and Muliava (Rose Atoll), and show to the world how special and important these remote islands and surrounding corals are.

Sanctuary Advisory Council Led Fishing Tournament in American Samoa:

The sanctuary team met with the Sanctuary Advisory Council Fishing Working Group to plan for the upcoming sanctuary photo-fishing tournament set for April 2015. Community and advisory council member engagement, outreach needs, potential sponsors, and tournament logistics were discussed. The tournament will be a community event led by the sanctuary advisory council to assist the sanctuary team in raising awareness of allowable and prohibited fishing practices that vary in the different sanctuary management areas. The effort will also help to enable voluntary compliance sanctuary regulations.

National Marine Sanctuary of American Samoa Advisory Council Orientation for New Members: Sanctuary team members have met with new advisory council members to discuss sanctuary programs, council member roles and responsibilities, subcommittees and working groups, and how council meetings operate. Additionally, new members were briefed on recent projects, upcoming events, regulations, and the Marine Protected Area-Federal Advisory Committee and advisory council chairs joint statement regarding sustainable ocean recreation.

Sanctuary Team Meets Sanctuary Community Members:

The sanctuary team met with members from the sanctuary communities, (Ta'u, Aunu'u, Fagatele and Fagalua/Fogama'a), to discuss stakeholder engagement and next steps in the implementation of eco-place businesses within their villages. Some items discussed as next steps included meeting with village council to discuss a letter of acknowledgement, soliciting interested parties to implement eco-place businesses in sanctuary areas. This includes developing eco-business opportunities description, conducting trainings, assisting with submission of proposals, and project implementation. Separate Village Council meetings have been scheduled

2) Marine Conservation Science and Monitoring

Benthic Survey Training with Partners and Sanctuary Monitoring:

The Sanctuary Research Coordinator participated in benthic survey training/standardization with the Coral Reef Ecosystem group in Hawai'i. Training involved benthic cover and coral demographic survey methods, several dives to standardize methods among all observers, and discussion of differences in records and gray areas/tough calls. All trainees will be participating in the upcoming Rapid Assessment and Monitoring Program (RAMP) monitoring cruises in American Samoa that includes more intensive surveying in sanctuary areas. This is the primary monitoring for the sanctuary and for American Samoa as a whole, providing key information for managing our resources.



Coral Bleaching Monitoring in Fagatele Bay:

Tutuila Island is currently on Bleaching Warning Status according to NOAA's Coral Reef Watch. Substantial coral bleaching happened during February in some shallow, backreef areas more prone to bleaching. Predictions indicate the possibility of a mass coral bleaching event on the reef slopes in the coming months. In order to monitor the status of coral bleaching in sanctuary waters, the research coordinator conducted roving observations for bleaching in Fagatele Bay and marked five areas for repeated photo monitoring. Most areas visited were free of bleaching, but several colonies of mounding *Porites* in 2-3 m depth exhibited moderate to high bleaching throughout the colony. Four colonies of the threatened coral, *Isopora crateriformis*, were bleaching on the reef flat. Monitoring will continue as weather/accessibility allows over the coming months. A mass bleaching event has the potential to drastically impact coral populations in sanctuary waters.

Contaminant Study in Fagatele Bay:

This week, Dr. Rusty Day of the National Institute of Science and Technology (NIST) collected samples in two bays on Tutuila for contaminant analysis studies in collaboration with the National Marine Sanctuary of American Samoa. It has been a long-standing question whether chemical contaminants from the island's unlined landfill are affecting the biota of nearby Fagatele Bay, and this study will be the first to directly address that question. Samples of two coral species, one macroalgal species, and one crustose coralline algae morphotype were collected at two sites in Fagatele Bay and four sites in Faga'alu Bay. The sampling team included the Sanctuary Research Coordinator as well as divers from the local Coral Reef Advisory Group and the Department of Marine and Wildlife. Samples will be analyzed within the year, but also cryogenically frozen and added to their bank of specimens that will be kept for long-term studies over decades. Dr. Day will continue sampling while on the NOAA Rapid Assessment and Monitoring Program research expedition that covers the remote sanctuary areas. This information will provide valuable insight into land-based sources of pollution that

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may affect water quality and marine resources in American Samoa.

Data Management Workshop:

The Research Coordinator participated in a data management workshop conducted by Dr. Peter Houk of the University of Guam and focusing on analysis of complicated, multivariate datasets. Participants are using survey datasets from American Samoa to learn more efficient methodologies and tricks for data processing and analysis. Programs include Excel, SigmaPlot, PRIMER, and coding in R. The workshop is building more capacity for processing large, complicated datasets available through monitoring programs like Coral Reef Ecosystem Division's Rapid Assessment and Monitoring Program (RAMP). This will make data more available to and useful for managers.

Seminar on Upcoming Reef Monitoring:

The sanctuary hosted a public seminar by representatives of NOAA's Coral Reef Ecosystem Division (CRED). The talk outlined the work done by their organization and what they will be surveying over the next five weeks in the territory. They are conducting the RAMP monitoring cruise, which surveys reefs and conducts oceanography, climate change, and biodiversity research throughout the Pacific Remote Islands and American Samoa, providing important information to managers. Representatives from several agencies were present.



Planning for Surveys and COTS Data:

The Research Coordinator met with representatives from CRED to discuss the details of upcoming survey work for the sanctuary that will be conducted by CRED during their RAMP cruise. CRED will be spending an extra four days in sanctuary sites to more intensively monitor resources in sanctuary areas that have fishing restrictions. This will provide an important baseline to assess future change due to management efforts. They also discussed information that will assist in the upcoming COTS (crown-of-thorns starfish) removal blitz; CRED will be conducting tow surveys across the whole island that will provide detailed information on COTS hotspots that can then be targeted for removals. This will greatly assist our cross-NOAA collaborative efforts on this issue.

3) Ocean Literacy

National Marine Sanctuary Stands Out at STEM Festival:

On Saturday January 17th, 2015, the first annual STEM Festival took place in Pago Pago, American Samoa. A wide variety of age groups interested in career opportunities in Science, Technology, Engineering, and Mathematics (STEM) were welcomed and interacted with over 25 agencies/organizations working in these fields. NOAA, including the National Marine Sanctuary

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of American Samoa, had a very large booth with hands-on activities and outreach materials to promote public awareness on careers and opportunities available to students now and in the future. Over 500 students visited the NOAA booth! NOAA has already been welcomed to next year's event and the sanctuary looks forward to inspiring the future generation of potential NOAA employees and scientists from American Samoa



Isabel Gaoteote engages attendees with trivia questions.



Joseph Siatu'u shares facts about some of the marine critters.



Kelley Tagarino shows some of the local marine critters.

Voyaging Science, Technology, Engineering, Mathematics (STEM) Project Stakeholder Meeting: The National Marine Sanctuary of American Samoa along with other stakeholders; Pacific Voyaging Society (PVS), University of Hawai'i College of Education (UHCOE), Hawai'i Department of Education (HDOE), American Samoa Department of Education (ASDOE), American Samoa Community College and Le Tausagi group, met to discuss upcoming Voyaging STEM workshops for teachers in American Samoa. The objective of the Voyaging STEM Project is to create a series of workshops and a set of tools for ASDOE curriculum staff and interested teachers to plan/create/deliver/assess project-based STEM lesson units around the Malama Honua Worldwide Voyage that are tied to Mathematics and ELA Common Core State Standards and Next Generation Science Standards. Stakeholders met to develop workshop modules. During these workshops, teachers from American Samoa will virtually connect with teachers in Hawai'i to discuss best practices and lessons learned in the classrooms. Modules will be based around STEM and how it is tied to Malama Honua World Wide Voyage. This project provides a good opportunity to create new local and regional partnerships and build support for local teachers.

NOAA's Presence at the Territory-Wide Science Fair:

NOAA employees including several members of the sanctuary team helped the Department of Education judge science fair projects. All students being judged had made it through and done well enough at their school science fair's to compete in the territory-wide science fair. All ages and grades participated throughout the week. The top winner will be sponsored to attend the International Science Fair in May of 2015. The One NOAA American Samoa team also maintained a booth throughout the week to conduct outreach to students and teachers.

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Information was handed out on all the wonderful programs NOAA offers for both teachers and students.

NOAA Coral Bleaching Outreach Campaign:

Recent coral bleaching in shallow nearshore areas around American Samoa has drawn interest from NOAA's Coral Watch program and the Coral Reef Conservation Program (CRCP). The Research Coordinator has been working with CRCP's outreach coordinator to provide photos and written content for an internet outreach campaign. The campaign will educate a broad audience on the threat of coral bleaching for American Samoa and the sanctuary.

4) Partnerships and Interagency Collaboration

Sanctuary Superintendent on Regional Collaboration and What Is in Store for 2015:

Gene Brighthouse, Superintendent of the National Marine Sanctuary of American Samoa was joined by staff at the All Hands Pacific Regional team meeting as she presented an overview and 2015 priorities talk on January 5th in Honolulu, Hawai'i. The meeting presented an *opportunity to share and highlight accomplishments, regional collaboration, and outlined work for the coming year.*

Sanctuary Superintendent Gene Brighthouse participated in candidate interviews for the position of Superintendent for Papahānaumokuākea Marine National Monument in Honolulu. In addition to this, she also participated in visitation of Mokupapapa Discovery Center in Hilo, Hawai'i, and met with Dr. Randy Kosaki about the upcoming crown-of-thorns starfish (COTS) removal blitz in American Samoa in March-April, 2015.

NOAA Marine National Monuments Vision Team Meeting:

The NOAA Marine National Monuments Working Group met in January 2015 in Honolulu with the NOAA leadership to review the Visioning Statement draft. The vision statement calls for the U.S. Marine National Monuments Programs within NOAA to coordinate/contribute towards global leadership by demonstrating effective, place-based marine conservation built upon sound science, community engagement, and cultural heritage as the foundation for management. The sanctuary was represented by Atuatasi Lelei Peau with the Director of ONMS Dan Basta, Deputy Director John Armor, and Pacific Island Regional Director Allen Tom.



In-Service with American Samoa Environmental Protection Agency (ASEPA):

The sanctuary hosted an in service event with the Director of AS Environmental Protection Agency and managers from this office to share and bridge potential collaborative work in citizen science and monitoring within our sanctuary areas. The event allowed our staff to dialog and discuss opportunities and the ASEPA has, in

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turn, invited our office to work on an exchange program with their team.

Nutrient and water quality monitoring is an action item from the sanctuary management plan. This could also be an opportunity to engage communities in citizen science and understanding the correlation of land use activities having an impact on oceans.



National Marine Sanctuary of American Samoa In-Reach Service with American Samoa Visitors Bureau:

The National Marine Sanctuary of American Samoa conducted an in-reach session for the American Samoa Visitors Bureau (ASVB) at the Tauese P.F. Sunia Ocean Center. The purpose of the in-reach was to share common goals and dialog on how best to collectively improve community livelihoods and promote American Samoa as a destination. As an outcome of this session, ASVB requested of the National Marine Sanctuary of American Samoa to hold an

informational training session for its staff so they can better promote the sites as places to visit.



Sanctuary meets with Director and Staff of the American Samoa Visitors Bureau

In preparation for Eco Place tourism development, the sanctuary invited the American Samoa Visitors Bureau (ASVB) to visit the Ocean Center and discuss the 'selling points' of the

sanctuary. The director and staff of the ASVB were surprised to find out that the sanctuary boasts the greatest diversity of marine life in the National Marine Sanctuary System and the largest *Porites* coral head in the world. They were especially keen to find out more about the unique diving opportunities within the sanctuary and on the island of Tutuila in general. Additionally, some activities regarding eco place tourism, (snorkeling, diving, homestay, cultural trails, coastal hikes, and surfing), at each sanctuary areas were discussed.

This will aid in the effort to develop eco-place opportunities by connecting support systems to sanctuary communities in an effort to prepare and develop tour excursions for each sanctuary area - connecting tourism to communities and maintaining healthy coastal and marine ecosystems.

Development Bank of American Samoa (DBAS) Meeting:

Members of the sanctuary team met with Ruth Matagi-Fa'atili, President of the Development Bank of American Samoa (DBAS) to discuss funding opportunities for community members who want to establish eco place businesses in villages adjacent to sanctuary areas –connecting tourism to communities. Throughout the years DBAS has evolved into a socio economic development agency for American Samoa. One of its goals is to further the development of the private sector and the economy of American Samoa by providing commercial loans to start-up

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and expand existing businesses. Agencies working together to ground truth this effort include but are not limited to: Small Business Development Center at the Community College, American Samoa Visitors' Bureau, Department of Commerce, Development Bank of American Samoa, and National Marine Sanctuary of American Samoa. Information from this meeting will allow the sanctuary team to further guide and facilitate discussions with sanctuary communities on appropriate eco-tour businesses to propose for financing new ventures. This could help to develop eco-place opportunities by connecting and facilitating sanctuary communities' efforts in establishing eco-place tourism, and visitor-to-village excursions.

American Samoa Venture Fund – Possible Opportunities for Eco-Tourism Businesses in Sanctuary Areas: Sanctuary team members attended a monthly meeting of the American Samoa Chamber of Commerce. American Samoa Department of Commerce Director Keniseli Lafaele and his staff provided a presentation and described the benefits of the newly available American Samoa Venture Fund (ASVF). The ASVF is the result of the Territory's successful application for funding through the State Small Business Credit Initiative Program (SSBCI). The ASVF is an investment fund that manages money from the American Samoa SSBCI allocation (\$10. Million) and invests stakes in start-ups and small and medium-sized enterprises with strong potential. Investment priorities include: healthcare/medical, air and sea transportation, fisheries, agriculture, eco-tourism, and manufacturing. The program may provide opportunities for local entrepreneurs looking to start or expand eco-based business in communities adjacent to the sanctuary.

Developing a Process for Evaluating MPAs in American Samoa:

The sanctuary team met with the MPA Coordinator of the American Samoa-Coral Reef Advisory Group to discuss the development of an evaluation process for the effectiveness of marine protected areas in meeting territorial goals. Additionally the process can help to highlight gaps and priorities for management efforts and identify opportunities for building capacity. ONMS Condition Reports were highlighted as an example of an MPA evaluation tool currently utilized by the sanctuaries system. Differences and overlapping goals of federal and territorial MPAs were discussed as well as considerations for the objectives of long-term established MPAs and the objectives of more recent territorial management plans. Participation in planning efforts will help to ensure that sanctuary management goals are considered in developing the final territorial rating process.

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Partnership with Pago Pago Tradewinds Tours: Cruise Ship Day at the Ocean Center:

The National Marine Sanctuary of American Samoa's Tauese P. F. Sunia Ocean Center opened its doors to welcome and accommodate the visitors of the Arcadia cruise ship Thursday, February 12th, 2015. The National Marine Sanctuary of American Samoa team conducted informational tours for close to 500 visitors through a partnership with Pago Pago Tradewinds Tours as well as walk-in visitor traffic. Visitors learned about our natural resources, the beauty of our ocean, and what each person can do to help protect them.

Day Excursion to Aunu'u:

Members of the sanctuary team accompanied Miss American Samoa and two travel agents from *House of Travel* to experience and enjoy the home of one of our sanctuary areas, Aunu'u. *House of Travel* is an agency based in Auckland and is New Zealand's largest independent chain of travel agents offering overseas travel deals. The sanctuary Aunu'u Liaison led the tour to *Sina and Tigilau* which overlooks the Aunu'u sanctuary area Research Zone, then onward to the freshwater marsh. The tour also included a visit to the *quicksand* and ended with a demonstration of seeding and harvesting the famous Aunu'u taro that is grown in the wetlands. The National Marine Sanctuary of American Samoa partnered with the American Samoa Visitors Bureau to ensure this day excursion was successful! The American Samoa Visitors Bureau and the National Marine Sanctuary of American Samoa continue to collaborate in promoting American Samoa as a tourist destination.



Western Pacific Regional Fishery Management Council (Council) Fishery Ecosystem Plan (FEP) Update: The sanctuary team participated in a workshop to provide input for the 5-year update of the American Samoa FEP. The FEP establishes the framework under which the council will manage fisheries resources and begin the integration and implementation of ecosystem approaches to management. Areas that the council is looking to improve include: council structure and decision-making; data on social and economic impacts and interactions;

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data on essential fish habitat and habitats of particular concern; protected species needs and interactions with fisheries; by-catch; the effects of climate change on fisheries; and consideration of the connections between large marine protected areas and fisheries.

Western Pacific Fishery Management Council (Council) Proposed Exemption to Fish in the Large Pelagic Vessel Area (LVPA) in American Samoa: The sanctuary team participated in a public meeting of the council to learn more about proposed temporary exemptions for the longline industry that could decrease the current LVPA from 50 miles to from shore to as close as 12 miles to from shore. The LVPA is currently closed to all pelagic fishing vessels larger than 50 feet in length. It encompasses about 33,000 square nautical miles of the 118,354 square nautical miles of the EEZ around American Samoa. In a meeting last year, the council deferred taking action on changes until more meetings were held in American Samoa. In public meetings in June of 2014, alia vessel operators and owners came out against the proposal to amend the LVPA in waters surround American Samoa. The Council of Treaty Chiefs of Tutuila, Aunu'u and Manu'a and the Council of District Governors also signed a petition opposing the proposal. The council will be taking up the proposal during the March 2015 meeting in Honolulu.

American Samoa Chamber of Commerce – Efforts to “Green” the Territory: The sanctuary team participated in a meeting of the AS-Chamber of Commerce. The focus of the meeting was “greening” the territory to attract tourism, benefit businesses, and protect land-based and ocean resources. A presentation was provided by the Director of the American Samoa Environmental Protection Agency on recent efforts in the territory. The talk focused on existing laws, enforcement, attempts to deputize citizens, adopt-a-street and adopt-a-stream programs, coastal clean-ups, and private sector contributions. Additionally, the chair of the Chamber discussed the lack of existing recycling facilities as an opportunity for private sector development. Recently the Chamber has been focusing on conservation issues with implications to the local economy. The sanctuary team is currently planning an event to brief the chamber on recent threats in American Samoa including coral bleaching and destruction of reefs by crown-of-thorns starfish. Both have negative impacts on livelihoods, businesses, and the economy. The event will also be an opportunity to discuss how the private sector can assist in furthering current efforts to address these threats.

5) Management Plan Implementation

Tracking and Prioritizing Management Plan Implementation in American Samoa:

The sanctuary team has been involved in a planning process to prioritize and track the implementation of management plan activities for the next three years. This has included reviewing action plan strategies, activities, associated time lines and resources required to successfully implement the plan as outlined. It has allowed the team ground-truth progress to date and identify gaps that need to be addressed. Eight team working groups have been established to accomplish the activities of all of the action plans of the sanctuary management plan. This effort will help to ensure that the sanctuary program fulfills the commitments that were made to community members and partners to protect cultural and marine resources of these special places as well as stay on track for the next management plan review process.

Recent Events

National Marine Sanctuary of American Samoa launches “Get Into Your Sanctuary!”

The campaign was launched on February 27, 2015 and will run through October 2015. Several hundred people including local officials, students, community members, sanctuary advisory council members, and the media participated in the event at the Tauese P.F. Sunia Ocean Center. Catlin Seaview Survey Project Director Richard Vevers also presented to participants on visual imagery data taken during surveys last December to contrast with images taken during February 2015 of coral bleaching.



National marine sanctuaries are ideal destinations for residents, visitors, community members and travelers who enjoy a diversity of place based recreational activities and promotion of marine protected areas and preservation for future generations. So get inspired, create your own unique experience, and Get Into Your Sanctuary in 2015!

The National Marine Sanctuary of American Samoa has planned to make 2015 a year dedicated to “*Get Into Your Sanctuary.*” Over the course of the next year every sanctuary area will be highlighted. There will also be summer youth programs.



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The goals of this campaign are to increase awareness of the sanctuary by showcasing sustainable tourism and recreational opportunities within national marine sanctuaries and secondarily for visitors to share their experiences through social media. This campaign also provides an opportunity to build partnerships between tourism purveyors, travelers, community members, and national marine sanctuary staff. The promotion will run from March to October 2015.

Representatives at each site will participate in recreation and tourism activities sharing their unique experiences and photos along the way. National marine sanctuaries also encourage schools, travelers and community members to explore sanctuaries all across the Territory by adding the hashtag #visitsanctuaries. Anybody can share their experience and participate in the campaign.

The *“Get Into Your Sanctuary”* Year is designed to promote awareness of national marine sanctuaries as iconic places and visitor experience by highlighting both popular and off the beaten path adventures that these sites and surrounding areas have to offer. To get involved in the campaign follow the National Marine Sanctuary of American Samoa on Facebook.