



## Member’s report on activities related to ICRI

Reporting period July 2012 - October 2013

1. **General Information** (note that this information will be posted on the ICRI website in your member page: <http://www.icriforum.org/about-icri/members-networks>)

Are you an ICRI Member?	Yes
Member type (Country / Organization):	Country – United States of America
<b>Focal Point 1:</b>	
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<b>Focal point 2:</b>	
<i>Name:</i>	Stephanie Aktipis
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Last meeting attended:	27 <sup>th</sup> General Meeting
Related website(s)	

2. **Updates on your activities** (new initiatives/programs/projects of your government /organization which will be of interest to the ICRI Members). Examples include MPA declarations, World Heritage sites status, economic valuation of reefs, policy changes in relation to coral reefs etc.

### US Support to the Coral Triangle Initiative

The United States government continued its support for the Coral Triangle Initiative on Coral Reefs, Fisheries, and Food Security (CTI-CFF), a multilateral partnership to sustain the Southeast Asia region's extraordinary marine and coastal biological resources. Recognized as the global epicentre of marine biological diversity, the Coral Triangle region is shared within the waters of six countries – Indonesia, Malaysia, Papua New Guinea, the Philippines, Timor-Leste, and the Solomon Islands – where one in three people of the region’s 363 million rely upon coastal fisheries for their primary food security each day. The United States Government was the first financial supporter and partner to the CTI-CFF, with the U.S. Agency for International Development (USAID) providing over \$41 million over 5-years to regional programs to support implementation of the CTI-CFF. The U.S. team providing support to the CTI-CFF involves the State Department, USAID, National Oceanic and Atmospheric Administration (NOAA), a consortium of NGOs (World Wildlife Fund, The Nature Conservancy and Conservation International), and a contractor which functions as the Program Integrator. Additional support is provided by USAID’s bilateral missions in Indonesia, the Philippines and Timor-Leste, and NOAA. Altogether, U.S. government support totals more than \$60 million.

U.S. government support promotes the adoption of best practices in regional ocean governance and the management of coastal and marine ecosystems to ensure the long-term provision of the essential services they provide to local people. Such best practices include: strengthening institutions to sustain impact; harmonizing and implementing an ecosystem approaches to fisheries management policy and practice across the region; establishing a six-country system of marine protected areas and management effectiveness framework; and pairing a Region-wide Early Action Plan for Climate Change Adaptation with local toolkits and capacity.

In FY2014, USAID and NOAA will support the enhancement of scientific and technical capacity surrounding oceans, coasts, weather and climate across Asia and the Pacific Islands, including the Coral Triangle, Philippines, Indonesia and Timor-Leste. Technical assistance areas will include disaster risk reduction and resilience across Asia-Pacific; climate services and adaptation in the Pacific Islands; combating IUU fishing and promoting sustainable fisheries management in Asia; and improving oceans, coasts, weather, and climate science.

### **ECO-FISH Program in the Philippines**

Through the new ECO-FISH Program, USAID is assisting the Philippines Government and local communities to enhance fisheries productivity and livelihoods. ECO-FISH is assisting in the implementation of an ecosystem-based approach to fisheries management. The program is using a Growth, Control and Maintenance approach to increase and “grow” fish populations; “control” access, use of closed seasons and proper gear, and establish a national licensing system; and “maintain” the system by increasing capacity and revenue streams. The program is working in eight national “Marine Key Biodiversity Areas” to strengthen fisheries management and enforcement.

### **Status Review of 82 Species of Coral under the U.S. Endangered Species Act**

The U.S. government has continued the process initiated by the October 20, 2009 petition from the Center for Biological Diversity to list 83 species of coral in the Caribbean and Indo-Pacific as threatened or endangered under the U.S. Endangered Species Act (ESA). On December 1, 2012, the National Oceanic and Atmospheric Administration (NOAA), as the lead agency tasked with overseeing the U.S. government response to the petition, proposed ESA listings for 66 coral species: 59 in the Pacific Ocean and seven in the Atlantic/Caribbean. In the Pacific Ocean, seven species are proposed as endangered and 52 as threatened. In the Atlantic/Caribbean, five are proposed as endangered and two as threatened. In addition, NOAA proposed that the two threatened Atlantic/Caribbean species—elkhorn and staghorn corals— be reclassified from threatened to endangered.

On February 25, 2013, NOAA Fisheries extended the comment period on the proposed listing determinations of 66 reef-building coral species and the proposed reclassifications of elkhorn (*Acropora palmata*) and staghorn (*Acropora cervicornis*) corals under the ESA. Comments were accepted until April 6, 2013, and public hearings were held in Florida, Puerto Rico, U.S. Virgin Islands, Hawaii, American Samoa, Guam, Commonwealth of Northern Mariana Islands and Silver Spring, MD.

In September 2013, NOAA announced an extension of up to 6 months to make a final determination on the proposed rule. The extension will be used to gather additional data from experts in the field to inform the final rule and resolve conflicts identified after reviewing the public comments.

### **National Coral Reef Monitoring Plan**

The NOAA Coral Reef Conservation Program recently initiated the National Coral Reef Monitoring Plan (NCRMP), a strategic framework to observe biological, physical, and socioeconomic parameters to monitor the status and trends of all U.S. coral reef ecosystems. In partnership with the NOAA Ocean Acidification Program, NCRMP includes a novel array of fixed in situ instruments and observations of calcification, growth, and bio-erosion rates, and community biodiversity. The biological component of NCRMP includes random stratified sampling of coral and fish community structure. The climate component includes thermal stress monitoring, via satellites and in situ instrumentation, ocean acidification monitoring, via fixed Moored Autonomous pCO<sub>2</sub> (MAPCO<sub>2</sub>) buoys, and wide-scale water sampling. The socioeconomic component includes random stratified sampling of residents in inhabited islands/counties in direct proximity to coral reefs via in-person or telephone surveys on knowledge, attitudes, and perceptions of coral reef issues and human use of coral reef resources. In 2013, biological surveys were conducted in the U.S. Virgin Islands, Flower Garden Banks, and Main Hawaiian Islands; climate observations were conducted in Florida, U.S. Virgin Islands, Main

Hawaiian Islands, and the Northwestern Hawaiian Islands; socioeconomic surveys in Florida and American Samoa are planned for late-2013/early-2014.

### **Invasive Lionfish Control Initiatives**

Several initiatives are underway to respond to invasive lionfish in MPAs of the Wider Caribbean region. MPAs around the region are struggling to deal with the threats lionfish pose to coral reefs. However, success stories are emerging in some MPAs where lionfish are being controlled. A strong partnership between NOAA and CONANP (Mexico) is developing approaches to lionfish control in CONANP MPAs along the Yucatan. This effort is documenting community responses to lionfish control such as engaging multiple sectors including the dive industry, commercial fishers, organized volunteers, and the general public to reduce lionfish densities and ecological impacts. A lionfish web portal is under construction to provide training modules, research, monitoring, and outreach information. A lionfish regional strategy has been completed and will be published soon by ICRI. The strategy calls for MPA managers in the Caribbean region to develop control plans protecting native reef fish communities and coral reefs from lionfish impacts. The 6th Annual Lionfish Special session at GCFI Corpus Cristi, TX will be held Nov 5 with over 30 presentations on new lionfish research. A workshop on "Lionfish harvesting challenges and opportunities" will also be held Nov 4 at GCFI Corpus Cristi, TX to address harvesting lionfish control efforts around the region. For more information, contact James Morris, NOAA at [james.morris@noaa.gov](mailto:james.morris@noaa.gov)

### **U.S Jurisdictional Capacity Assessments**

NOAA's Coral Reef Conservation Program is investing in capacity assessment efforts to build more sustainable coral reef conservation communities in partnership with U.S. coral reef jurisdictions (American Samoa, the Commonwealth of the Northern Mariana Islands, Florida, Guam, Hawaii, Puerto Rico, and United States Virgin Islands). The purpose of the assessments is to identify technical and management capacity gaps in each of the jurisdictions and provide recommendations to understand the capacity gaps in local agencies with the responsibility to manage coral reefs, as well as to engage the larger conservation communities in the jurisdictions, other federal partners in the United States Coral Reef Task Force, and NGOs on how best to assist in improving management capacity to further efforts to protect coral reefs. American Samoa, Hawaii, Puerto Rico and United States Virgin Islands assessments are completed. The Commonwealth of the Northern Mariana Islands, Florida and Guam are underway and expected to be completed by December 2013. To learn more, see:

<http://coralreef.noaa.gov/aboutcrpc/strategy/reprioritization/capacityassessments/>

### **Climate Adaptation Planning**

The Climate Change Working Group (CCWG) of the U.S. Coral Reef Task Force has begun a collaborative project to explore frameworks and methodologies for climate change adaptation planning for coral reef management. Funded by the Environmental Protection Agency (EPA) and NOAA, the project is engaging federal and regional experts to: review recent advances in assessment and planning for climate change by coral reef practitioners; and use this information to tailor recent theoretical adaptation methods into a form that is more useful for coral reef management. The resulting coral adaptation-planning framework will be piloted, critiqued and revised at a stakeholder meeting in the Pacific Region in 2014.

### **Enforcement Capacity Building in Micronesia**

In 2013, the Pacific Islands Managed and Protected Area Community (PIMPAC), Micronesia Conservation Trust, and Pew Charitable Trusts, in partnership with the Guam Division of Aquatic and Wildlife and the Guam Supreme Court, implemented a series of compliance and enforcement trainings, which focused on coral reef MPAs and new laws protecting reef sharks resulting from the recent declaration of shark sanctuaries in the region. The trainings included: an MPA Enforcement training for 20 officers from state enforcement agencies in Palau, October, 2012; an enforcement learning exchange in Kosrae between community based MPA Managers in Yap and Kosrae, February, 2012; and a week-long Community MPA Compliance and Enforcement Training for 28 residents from 16 outer atolls in the Marshall Islands to introduce simple,

effective ways to improve fisheries enforcement of fisheries, MPAs, and other natural resource rules and regulations, August, 2013. The trainings have resulted in the development of enforcement strategic action plans and a local enforcement task force to increase collaboration. On May 9, the Governor’s Association of Palau approved the formal recognition of the Alliance of Palau Conservation Officers (APCO), which is advised by PIMPAC Mentor Wayne Andrew. APCO coordinates marine enforcement efforts across communities, state and national enforcement organizations for more effective compliance and enforcement in Palau waters.

### **Our Florida Reefs**

NOAA’s Coral Program has been working closely with the State of Florida to design and initiate “Our Florida Reefs,” a community planning process for SE Florida’s coral reefs ([ourfloridareefs.org](http://ourfloridareefs.org)). Hosted by the Southeast Florida Coral Reef Initiative (SEFCRI), this planning process brings together the community of local residents, reef users, business owners, visitors and the broader public in Miami-Dade, Broward, Palm Beach, and Martin counties to discuss the future of coral reefs in this region. The process is designed to increase public involvement in the future management of southeast Florida’s coral reefs by seeking input from community members on the development of recommendations that can become part of a comprehensive management strategy to ensure healthy coral reefs in the future.

### **Economic Value of U.S. Coral Reefs**

Based on data included in NOAA’s literature review and meta-analysis report titled, *The Total Economic Value of U.S. Coral Reefs: A Review of the Literature*, the total economic value of coral reefs for the United States is almost 3.5 billion dollars. The report, released in July 2013, summarizes the economic valuation studies that were conducted over a ten year period for all U.S. coral reef jurisdictions

### **Mapping of U.S. Coral Reef Ecosystems**

The National Summary of NOAA’s Shallow-water Benthic Habitat Mapping of U.S. Coral Reef Ecosystems was released in December 2012. The report encompasses 10 areas of highly productive reef regions and provides key information on NOAA efforts to map more than 3 million acres (12,100 km<sup>2</sup>) of shallow-water (0-30 meters) coral reef habitats spanning the Pacific, Atlantic and Caribbean.

<http://coralreef.noaa.gov/aboutcrp/news/featuredstories/jan13/>

### **NOAA Collaboration with the Great Barrier Reef Marine Park Authority**

NOAA’s CRCP program is collaborating with the Great Barrier Reef Marine Park Authority (GBRMPA) under the AusAID-funded Australia-Caribbean Coral Reef Collaboration. NOAA shares expertise and networks relating to climate change adaptation and coral reef conservation and engages with a number of priority regional projects, including development of a regional plan of action for coral reefs in the Caribbean and a monitoring multitool for coral reef managers. This work continues to build the foundations for a strategic initiative to compile resources and guidance to support coral reef managers dealing with climate change.

### **Reef Smart**

The NOAA Coral Reef Conservation Program also launched Reef Smart, an education initiative designed to engage students, stakeholders and policy makers to increase the awareness of NOAA’s coral reef ecosystem research and discuss ways NOAA existing technology, data and expertise can be leveraged to support the needs of local managers in coral reef priority areas.

### **Land-based Sources of Pollution Initiatives**

[NOAA Coral Reef Conservation Program](#): Over the past year, the NOAA Coral Reef Conservation Program has invested significantly in addressing land-based sources of pollution (LBSP) across seven domestic States and Territories. These efforts include: watershed management planning, building local capacity to address watershed issues, implementing best management practices to mitigate LBSP inputs, and monitoring the biological effects of LBSP on coral reefs. More information at: <http://www.coris.noaa.gov/portals/steer/>

U.S. Coral Reef Task Force Watershed Partnership Initiative: Recognizing that the threat of land-based sources of pollution on coral reef ecosystems crosses multiple jurisdictional boundaries and authority and responsibility to address it falls to a multitude of governmental and jurisdictional levels, the U.S. Coral Reef Task Force initiated a Watershed Partnership Initiative in 2009. The intent of this partnership is to coordinate agency resources and expertise to implement geographically specific and integrated activities, while also promoting consistent and strengthened application and enforcement of laws and authorities intended to address land-based sources of pollution. The U.S. Coral Reef Task Force is implementing this partnership approach in three watersheds, Guánica Bay/Rio Loco in Puerto Rico (2009) and Ka’anapali in West Maui, Hawai’i (2010), and Faga’alu in American Samoa (2012).

US Environmental Protection Agency: EPA is advancing programmatic activities to protect coral ecosystems and would like to work with regional partners to ensure they focus on issues and in areas that complement on-going conservation activities congruent with the Clean Water and Clean Air Acts. EPA has increased engagement and collaboration in Puerto Rico and the US Virgin Islands to support coral reef management.

Hawaii Watershed Management: In December 2012, NOAA issued the release of a comprehensive management plan to combat pollutant damage to corals along the coast of west Maui, Hawaii. The plan focuses on the Wahikuli and Honokawai watersheds and was developed using input from community meetings and public comments. The plan is the first in the state of Hawaii to comprehensively address how runoff is affecting reef health and includes actions the government, private sector, and community members can do to ensure the delivery of valuable and vital ecosystem goods and services.

### 3. Contribution to the ICRI GM

*Your responses to the following questions will assist the Secretariat in assessing contributions towards the major themes of the current ICRI action plan and objectives of the general meeting.*

#### a. Community-based monitoring

Are you engaged in, or support community-based monitoring in your marine areas? If so, think about what works and what doesn’t with it to be prepared for workshop discussions on this topic. The discussions will revolve around:

- The benefit of community-based monitoring for management and reporting
- Way forward and how countries could support each other through a network of persons involved in monitoring and an online database.

**Response: YES. NOAA currently supports and/or partners with the following community monitoring initiatives:**

#### **Guam Community Coral Reef Monitoring Program**

Established in 2012, the Guam Community Coral Reef Monitoring Program provides communities in Guam with the opportunity to engage coral reef protection. Community members learn how to conduct biological surveys to document different species of corals, algae, and macro invertebrates on Guam’s reef flats. Once members complete the monitoring training, they complete surveys on various reef flats around Guam. Survey data collected by community members will be available online and also will be summarized and presented to reef managers. The program aims to encourage residents to understand the value of Guam’s marine resources and become active stewards of Guam’s coral reefs. The program currently has nearly 250 members and has active sites in the Piti Bomb Holes Marine Preserve, Fouha Bay, and Umatac Bay. It will provide service learning credit to Guam’s high school students and is also supporting communication between local scientists and the community by hosting monthly presentations.

The program is now working with the NOAA Fisheries Pacific Islands Fishery Science Center’s Coral Reef Ecosystem Division (CRED) to develop an online web application and

database to allow our volunteers to enter and query data online. CRED is currently working on a similar application for the Guam resource agencies' monitoring program and should be able to easily modify that application for our needs. This will be a huge improvement in the program and will help individual community groups have more autonomy while still providing data to managers

Lessons learned:

1. The program has had tremendous positive feedback. Guam residents are excited to get involved and have sought opportunities to learn more about coral reefs and to help protect them.
2. Monitoring programs need to be realistic about the type of data that citizen scientists can collect. The Guam program keeps data collection simple and recognizes limitations. The program has selected methods that provide useful information for communities and managers, though not as detailed as methods used by professional scientists.
3. It is important to follow up with community members. It's not enough to train people and conduct occasional data collection events. There needs to be follow through as well. Early attempts in Guam failed because there wasn't a dedicated program coordinator. It takes a surprising amount of effort to schedule trainings and data collection events, coordinate program volunteers, enter data, advertise and recruit new members and report back to program members. Guam currently has a full time staff position, specifically to develop program materials, interact with community members and government managers, enter data, and work on outreach and education efforts. The government scientists working with the program conduct the trainings, ensure that data collection goes smoothly, and analyse the data.
4. There had been a lot of interest on Guam for this type of program but no one knew how to get started. The program was opened to all Guam residents and managers are now trying to identify cohesive groups around Guam that are interested in adopting their own monitoring site and are teaching additional steps, such as how to map reefs, select transects and work with their data. This will take some of the organizational and scheduling burden off of the program coordinator and should help build stewardship. Using existing groups makes members more likely to stay involved. The program is also starting to work with community groups, school groups, church groups, etc. The program has a facebook and web page for more information: <https://www.facebook.com/GUreefmonitoring>; <http://guamreefmonitoring.wordpress.com/>

**The Reef Environmental Education Foundation (REEF)**

EEF continues a 20-year tradition of volunteer fish counts that support marine sanctuary monitoring. REEF has developed training materials, field manuals, and data management and reporting capabilities for a wide variety of geographic areas, and volunteers frequently focus their work in marine sanctuaries. Their data and information has been used to determine the status and trends in fish communities, and contributes to the condition reports prepared periodically for the sanctuaries as well as helping to inform fisheries management in these areas.

**NOAA Office of National Marine Sanctuaries Monitoring Programs**

The NOAA Office of National Marine Sanctuaries manages community volunteer monitoring programs at the national level and at national marine sanctuaries across the country, including Stellwagen Bank, the Olympic Coast, Gulf of the Farallones, Monterey Bay, and the Channel Islands. Monitoring programs at coral reef sites include:

Caring for Florida Keys National Marine Sanctuary: Florida Keys National Marine Sanctuary Team OCEAN volunteers are stationed on sanctuary vessels at heavily visited reef sites throughout the Keys during peak recreational boating seasons and high-traffic holiday weekends. Volunteers inform the public about the sanctuary and its special zones, encourage

proper use of sanctuary resources, and provide tips on how to practice basic boating safety. Team OCEAN volunteers also participate in beach clean-ups, removing up to 10,000 pounds of marine debris yearly.

Conducting Scientific Diving and Phytoplankton Monitoring at Gray's Reef National Marine Sanctuary: Volunteer divers work with Gray's Reef National Marine Sanctuary's scientific dive operations to conduct fish counts, marine debris removal, and assist with sanctuary dive operations during the field season and on research cruises. Gray's Reef volunteers also conduct trawls of estuarine and coastal waters to observe present species of phytoplankton. Looking at patterns in abundance of common species along with weather and environmental factors can give fisheries managers a heads-up concerning harmful algal blooms (HABs) resulting in red tides and fish kills.

**b. Co-management**

Do you have co-management arrangements in place for your marine reserves? If so, start thinking about what they are, and what works for you in preparation for workshop and field trip discussions on this topic. There will be some interactive exercises to help guide your thinking and possible way forward.

**Response: YES.**

USAID promotes co-management arrangements in most of its development programs. Co-management arrangements include the fishers in management decision-making process along with the local managers. Including fishers in the development of regulations helps to build “social capital,” shown to be a critical component of successful management. Social capital enhances compliance with the laws and regulations and increases enforcement effectiveness.

A number of coral sites within the NOAA National Marine Sanctuary System have formal co-management arrangements in place, usually through a formal MOU and within the boundaries when State waters are included. These sites include the National Marine Sanctuary of American Samoa, Hawaiian Islands Humpback Whale National Marine Sanctuary, Papahānaumokuākea Marine National Monument, and the Florida Keys National Marine Sanctuary.

**4. Is there any other topic you would like to raise during the meeting?**

YES  NO

If yes, please indicate which topic and the reason why you would like to raise it:

**5. Please list relevant publications, reports you have been released since the last meeting.**

Title (incl. author and date)	Type of publication (Paper, report etc.)
U.S. Coral Triangle Initiative Support Program. (2013). <i>Climate Change Adaptation for Coral Triangle Communities: Guide for Vulnerability Assessment and Local Early Action Planning (LEAP Guide)</i> .	
Pomeroy, R., R. Brainard, M. Moews, A. Heenan, J. Shackeroff, and N. Armada. <i>Coral Triangle Regional Ecosystem Approach to Fisheries Management (EAFM) Guidelines</i> .	

Publication. Honolulu, HI: The USAID Coral Triangle Support Partnership, 2013.	
Heenan, A., R. Pomeroy, R. Brainard, A. Amri, P. Alino, N. Armada, J. Bell, W. Cheung, L. David, R. Guieb, S. Green, J. Jompa, T. Leonardo, C. Logan, S. Mamauag, P. Munday, B. Parker, J. Shackeroff, and Z. Yasin. <i>Incorporating Climate Change and Ocean Acidification into an Ecosystem Approach to Fisheries Management (EAFM) Plan</i> . Publication. Honolulu, HI: The USAID Coral Triangle Support Partnership, 2013.	
Flower, K.R., Atkinson, S.R., Brainard, R., Courtney, C., Parker, B.A., Parks, J., Pomeroy, R., & White, A. (2013). <i>Toward ecosystem-based coastal area and fisheries management in the Coral Triangle: Integrated strategies and guidance</i> . Jakarta, Indonesia: Coral Triangle Initiative Support Program for the U.S. Agency for International Development.	
The National Summary of NOAA's Shallow-water Benthic Habitat Mapping of U.S. Coral Reef Ecosystems. <a href="http://coralreef.noaa.gov/aboutcrp/news/featuredstories/jan13/">http://coralreef.noaa.gov/aboutcrp/news/featuredstories/jan13/</a>	
American Samoa, USVI and Puerto Rico capacity assessments: <a href="http://coralreef.noaa.gov/aboutcrp/strategy/reprioritization/capacityassessments">http://coralreef.noaa.gov/aboutcrp/strategy/reprioritization/capacityassessments</a>	
An assessment of chemical contaminants detected in passive water samplers deployed in the St. Thomas East End Reserves (STEER). NOAA Technical Memorandum NOS/NCCOS 157. Silver Spring, MD. 22 pp. <a href="http://data.nodc.noaa.gov/coris/library/NOAA/CRCP/project/20414/STEER-POCIS-Report_FINAL.pdf">http://data.nodc.noaa.gov/coris/library/NOAA/CRCP/project/20414/STEER-POCIS-Report_FINAL.pdf</a>	
An assessment of chemical contaminants, toxicity and benthic infauna in sediments from the St. Thomas East End Reserves (STEER). NOAA Technical Memorandum NOS NCCOS 156. Silver Spring, MD. 70 pp. <a href="http://data.nodc.noaa.gov/coris/library/NOAA/CRCP/project/20414/STEER-Sediment-Contaminants-and-Tox-Report_FINAL.pdf">http://data.nodc.noaa.gov/coris/library/NOAA/CRCP/project/20414/STEER-Sediment-Contaminants-and-Tox-Report_FINAL.pdf</a>	

**6. Please indicate upcoming coral reef-related meetings you or your organisation will attend**

- 2nd Global Conference on Land - Ocean Connections (GLOC-2) October 2- 4 2013, Montego Bay, Jamaica
- 17th meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) of the Convention on Biological Diversity (SBSTTA-17), 14-18 October 2013 Montreal, Canada
- 2nd Global Marine World Heritage Site Managers Conference, 17-20 October 2013, Corsica, France
- International Marine Protected Areas Congress, 21-27 October, Marseille, France
- 9<sup>th</sup> Pacific Island Conference on Nature Conservation and Protected Areas, 2-6 December, Suva, Fiji