



### Keeping you informed!

This email contains coral reef-related information that has been collected, compiled, and sent to your inbox every two weeks. This email is maintained by the U.S. All Islands Coral Reef Committee (AIC) Secretariat.

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The U.S. All Islands Coral Reef Committee (AIC) is still in the Marianas (through today, when the Business Meeting



in Guam will be held (10:30am-4:30pm ChST)) participating in the 36<sup>th</sup> U.S. Coral Reef Task Force (USCRTF) Meeting, but wanted to share with you some of what's been happening since the AIC last met in February 2016.

Check out our [newest blog post](#) and download our [AIC Chair's Report!](#)

## GRANTS & OPPORTUNITIES

### **U.S. Department of the Interior, Coastal Program**

Current Closing Date for Applications: [Sep 30, 2016](#)

The Coastal Program is a voluntary, incentive-based program that provides direct technical assistance and financial assistance in the form of cooperative agreements to coastal communities and landowners to restore and protect fish and wildlife habitat on public and private lands. <http://www.grants.gov/web/grants/view-opportunity.html?oppId=279630>

### **FY2017 NOAA Community-based Marine Debris Removal**

Current Closing Date for Applications: [Oct 14, 2016](#)

Projects awarded through this grant competition will implement effective, on-the-ground marine debris removal activities, with priority for those targeting medium- large-scale debris, including derelict fishing gear. Projects should also provide benefits to coastal communities, and create long-term ecological habitat improvements for NOAA trust resources. Through this solicitation NOAA identifies marine debris removal projects, fosters awareness of the effects of marine debris to further the conservation of living marine resource habitats, and contributes to the understanding of marine debris composition, distribution and impacts. Successful proposals through this solicitation will be funded through cooperative agreements. <http://www.grants.gov/web/grants/view-opportunity.html?oppId=287350>

### **2017 NOAA/NMFS Saltonstall-Kennedy Competitive Research Program**

Current Closing Date for Applications: [Dec 09, 2016](#)

The Saltonstall-Kennedy Act established a fund (known as the S-K fund) used by the Secretary of Commerce to provide grants or cooperative agreements for fisheries research and development projects addressing aspects of U.S. fisheries, including, but not limited to, harvesting, processing, marketing, and associated business infrastructures. Under this authority, grants and cooperative agreements are made on a competitive basis (subject to availability of funding) to assist in carrying out projects related to U.S. commercial and recreational fisheries. <http://www.grants.gov/web/grants/search->

[grants.html?keywords=NOAA-NMFS-FHQ-2017-2004980](#)

**\*NEW\* FY2017 NOAA Marine Debris Research**

Current Closing Date for Applications: [Dec 19, 2016](#)

Funding for this purpose comes through the NOAA Marine Debris Program as appropriations to the Office of Response and Restoration, National Ocean Service. The MDP invites applications requesting funding for research that explores the ecological risk associated with marine debris, determines debris exposure levels, and examines the fate and transport of marine debris in nearshore, coastal environments. Projects may address one or more of these research priorities and should be original, hypothesis-driven projects that have not previously been addressed to scientific standards. Successful proposals through this solicitation will be funded through cooperative agreements. <http://www.grants.gov/web/grants/view-opportunity.html?oppId=289016>

**FY17 NOAA Coral Reef Conservation Program, Domestic Coral Reef Conservation Grants**

Current Closing Date for Applications: [Jan 11, 2017](#)

These awards are intended to support coral reef conservation projects in shallow water coral reef ecosystems, including reefs at mesophotic depths, in American Samoa, the Commonwealth of the Northern Mariana Islands, Florida, Guam, Hawaii, Puerto Rico, the U.S. Virgin Islands, and coral-dominated banks in the U.S. portions of the Gulf of Mexico... Proposals submitted to this competition must address at least one of the following four categories: 1) Fishing Impacts; 2) Land-Based Sources of Pollution; 3) Climate Change; and 4) Local and Emerging Management Issues. <http://www.grants.gov/web/grants/search-grants.html?keywords=NOAA-NOS-OCM-2017-2005011>

**Research Opportunities in Space and Earth Sciences 2016 (ROSES-2016)**

Current Closing Date for Applications: [June 1, 2017](#)

This ROSES NRA (NNH16ZDA001N) solicits basic and applied research in support of NASA's Science Mission Directorate (SMD). ROSES is an omnibus NRA, with many individual program elements, each with its own due dates and topics. All together these cover the wide range of basic and applied supporting research and technology in space and Earth sciences supported by SMD. <http://solicitation.nasaprs.com/ROSES2016>

## EVENTS & DATES

**For more information on coral reef related events and dates, check out our [AIC Calendar](#).**

**[Meeting] ICRI General Meeting 31 | [November 2-4, 2016, Paris, France](#)**

The first General Meeting (International Coral Reef Initiative (ICRI) GM 31), under the France-Madagascar Secretariat, will be held from the 2nd to the 4th of November 2016 in Paris, France. Information related to the meeting will be posted frequently on this page. We recommend checking it regularly. <http://www.icriforum.org/ICRIGM31>

**\*NEW\* [Symposium] 2016 Fuller Science for Nature Symposium | [November 15, 2016 in Washington D.C.](#)**

The 2016 Fuller Symposium on November 15, 2016 will bring together a diverse array of experts to discuss how resilience can be a useful framework to rethink sustainability and conservation in the age of climate change. The event is free and open to the public and will take place at the National Geographic Society's Grosvenor Auditorium in Washington, D.C on November 15, 2016. It will also be streamed live on the web. <http://www.worldwildlife.org/initiatives/fuller-science-for-nature-fund>

**[Conference] 4th Sustainable Ocean Summit | [Nov 30 - Dec 2, 2016, Rotterdam, Netherlands](#)**

The SOS is the only international, multi-sectoral, business event dedicated to sustainable development,

science and stewardship of the seas, and is now an annual event. The SOS 2016 theme is "Ocean 2030: Sustainable Development Goals and the Ocean Business Community".

**[Conference] 8th National Summit on Coastal and Estuarine Restoration and 25th Biennial Meeting of The Coastal Society | December 10-15, 2016, New Orleans, LA**

Join the largest national summit in 2016, focused on coastal restoration, science, and management practices! <https://www.estuaries.org/Summit>

## RESOURCES

**Explaining ocean warming: causes, scale, effects and consequences** | <https://portals.iucn.org/library/node/46254>

This report represents the most comprehensive review to date on ocean warming. To build up the report, leading scientists from around the world were invited to join with colleagues to contribute individual chapters. It contains many recommendations from the scientists on capability gaps and research issues that need to be resolved if we are to tackle the impacts of ocean warming with greater confidence in the future.

**FACT SHEET: President Obama Takes A Historic Step To Address The National Security Implications Of Climate Change** | <https://www.whitehouse.gov/the-press-office/2016/09/21/fact-sheet-president-obama-takes-historic-step-address-national-security>

"Climate change is an urgent and growing threat to our national security, contributing to increased natural disasters, refugee flows, and conflicts over basic resources like food and water. The present day effects of climate change are being felt from the Arctic to the Midwest. Increased sea levels and storm surges threaten coastal regions, infrastructure, and property. In turn, the global economy suffers, compounding the growing costs of preparing and restoring infrastructure."

**NOAA Climate Connection**

**Newsletter** | <http://campaign.r20.constantcontact.com/render?m=1108948661887&ca=d5161184-58ab-4783-a07e-7b927ef82798>

NOAA Climate Connection is a monthly e-newsletter designed to increase climate literacy and communication capacity for NOAA personnel and partners. To subscribe, offer feedback, or submit a suggestion, please email [NOAAClimateConnection@noaa.gov](mailto:NOAAClimateConnection@noaa.gov).

## MEDIA

**Feds to transfer submerged lands to NMI** | <http://www.mvariety.com/cnmi/cnmi-news/local/89442-feds-to-transfer-submerged-lands-to-nmi>

GOVERNOR Ralph Torres on Thursday signed a memorandum of agreement with the U.S. Departments of Commerce and the Interior for the transfer to the CNMI of submerged lands and associated minerals surrounding Farallon De Pajaros, Maug and Asuncion.

**Global coral bleaching event might become new normal, expert warns** | <https://www.theguardian.com/environment/2016/sep/22/global-coral-bleaching-event-might-become-new-normal-expert-warns>

Eakin was speaking from Guam, where he was attending a US Coral Task Force meeting. He said some

reefs around Guam had been hit for a fourth year in a row. Eakin said the current forecasts suggested there would be bleaching next in Micronesia and the Marshall Islands and there was a good chance of bleaching in the Caribbean. "It's not finished yet but I'm hopeful at this point we are going to be seeing the end of it soon," Eakin said.

### **Global warming among topics for Coral Reef Task**

**Force** | <http://www.kuam.com/story/33144626/2016/09/Wednesday/global-warming-among-topics-for-coral-reef-task-force>

Task force co-chair Eileen Sobeck said, 'As everybody knows, coral reefs around the world are in a severe state of threat - that there have been global warming events, bleaching events because of high ocean temperatures, that have happened several times in the past few years, we're in the middle of another year with potential warming consequences here in the Marianas.' She said while it's impossible to manage threats at a global scale, the task force can tackle these threats at the local level by identifying resilient reefs and ways to mitigate potential harms.

**Meetings to focus on coral reef systems** | [http://www.postquam.com/news/local/meetings-to-focus-on-coral-reef-systems/article\\_11780fb0-7f1d-11e6-99f6-332045d470b1.html](http://www.postquam.com/news/local/meetings-to-focus-on-coral-reef-systems/article_11780fb0-7f1d-11e6-99f6-332045d470b1.html)

In the next few days, the U.S. Coral Reef Task Force will be conducting meetings and workshops on Saipan and Guam focusing on the status of the coral reef systems in both jurisdictions, the impact of climate change to the coral reef system, global and regional coral bleaching, among other topics.

**Tighter controls urged for manta ray tourism** | <http://phys.org/news/2016-09-tighter-urged-manta-ray-tourism.html>

Nearly 100 interactions were observed by researchers over a four month period. Manta rays exhibited responses such as changes in swimming speed and direction, ceasing feeding or leaving the area of a cleaning station during 34 per cent of the observed interactions.

**Time window for action to limit climate change is closing rapidly** | <http://phys.org/news/2016-09-window-action-limit-climate-rapidly.html>

The window of opportunity for limiting climate warming up to 2°C is closing rapidly. However, a reinforcing upward spiral of national government policy, non-state actions and transformative coalitions will be essential even after the Paris agreement, if dangerous climate change is to be avoided.

**Global warming is key topic at Hawaii conservation congress** | <http://phys.org/news/2016-09-global-key-topic-hawaii-congress.html>

The international community came together Thursday in Hawaii for 10 days of talks by leading academics, conservation groups and government officials to address the impacts of global warming, wildlife trafficking and environmental conservation.

### **How wave dynamics and water flows affect coral**

**reefs** | <https://www.sciencedaily.com/releases/2016/09/160919103739.htm>

The results offer new insight into how climate change will affect reefs on a local level -- and also hint at steps conservationists can take to reduce the impact of warming on these fragile ecosystems.

### **NASA begins study of Australia's Great Barrier**

**Reef** | <https://www.sciencedaily.com/releases/2016/09/160915094009.htm>

At a media briefing on Sept. 13 at Cairns Airport in North Queensland, Australia, scientists from NASA's COral Reef Airborne Laboratory (CORAL) mission and their Australian collaborators discussed the mission's objectives and the new insights they expect to glean into the present condition of the Great Barrier Reef and the function of reef systems worldwide.

### **Leonardo DiCaprio describes devastation of global coral reef bleaching –**

**video** | <https://www.theguardian.com/environment/video/2016/sep/20/leonardo-dicaprio-devastation-global-coral-reef-bleaching-video>

Addressing the US State Department's Our Oceans conference in Washington DC, DiCaprio says Australia's Great Barrier Reef has suffered what is thought to be the largest bleaching event ever recorded, and urges stronger action to protect it and other reefs around the world. DiCaprio says seeing the effects on the reefs off the Bahamas took his breath away – there was 'not a fish in sight, colourless, ghost-like coral'.

### **Coral Reef Fish Can See Colors Not Visible to the Human**

**Eye** | <http://naturalsciencenews.com/2016/09/21/coral-reef-fish-can-see-colors-not-visible-to-the-human-eye/>

The triggerfish had excellent color discrimination skills and were able to see certain colors in more detail than humans. The fish were especially adept at detecting differences in shades of blue, suggesting that their environment had shaped this adaptation.

### **Underwater soundscape may offer clues to coral health and aid reef**

**conservation** | <http://phys.org/news/2016-09-underwater-soundscape-clues-coral-health.html>

The study, published on August 23rd in the online journal Scientific Reports, has determined that sounds created by adult fish and invertebrates may not travel far enough for larvae—which hatch in open ocean—to hear them, meaning that the larvae might rely on other means to home in on a reef system.

### **From concrete to coral: breeze blocks make a splash regenerating**

**reefs** | <https://www.theguardian.com/science/blog/2016/sep/20/from-concrete-to-coral-breeze-blocks-make-a-splash-regenerating-reefs>

The oldest of these were increasingly covered in the dense matrix of reef life. Peering at the concrete blocks I could see evidence of their slow colonisation by encrusting bivalves - delicate tree-like growths of hydrozoans - and, hiding from the daylight, shoals of nocturnal soldierfish rested, waiting for the night.

**Coral fish stress out if separated from 'shoal-mates'** | <http://phys.org/news/2016-09-coral-fish-stress-shoal-mates.html>

"We have suspected that shoaling fish gain a 'calming effect' from living in a group. But up until now we have been unable to measure how widely spread this effect is in individual fish," [Lauren Nadler, lead author] said.

## RESEARCH

### **The mobilization of science and technology fisheries innovations towards an ecosystem approach to fisheries management in the Coral Triangle and Southeast**

**Asia** | <http://www.sciencedirect.com/science/article/pii/S0308597X16302093>

Here, we outline the methodology and results of an expert-opinion survey designed to elucidate and prioritize the implementation of these S&T innovations.

### **Supporting Risk Assessment: Accounting for Indirect Risk to Ecosystem**

**Components** | <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0162932>

In this case study from British Columbia, Canada, we illustrate how such "indirect risks" can be incorporated into risk assessments for seventeen ecosystem components.

**Rolling corals in the Mediterranean Sea** | <http://link.springer.com/article/10.1007%2Fs00338-016-1498-9>

Here, we report the occurrence of nodules of the Mediterranean endemic reef-building coral *Cladocora caespitosa* in Formentera (Balearic Islands, Mediterranean Sea).

**Extreme white colouration of frogfish *Antennarius maculatus* due to coral bleaching event** | <http://link.springer.com/article/10.1007%2Fs00338-016-1500-6>

An individual of the warty frogfish species *Antennarius maculatus* was observed camouflaging itself against fully bleached corals at 10 m depth at the Velidhoo Island resort reef (4°11'41.35"N, 72°49'20.55"E) in North Ari Atoll, Maldives, on 19 May 2016.

**The relative influence of abundance and priority effects on colonization success in a coral-reef**

**fish** | <http://link.springer.com/article/10.1007%2Fs00338-016-1503-3>

We manipulated the magnitude and timing of coral-reef fish settlement to investigate whether the competitive dominance of early-arriving Ambon damselfish (i.e., a priority effect) decreased in strength with increasing abundance of late-arriving lemon damselfish.

**Temperature Regimes Impact Coral Assemblages along Environmental Gradients on Lagoonal Reefs in Belize**

| <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0162098>

Here, we investigate coral community composition across three different temperature and productivity regimes along a nearshore-offshore gradient on lagoonal reefs of the Belize Mesoamerican Barrier Reef System (MBRS).

The logo for NOAA CORIS is a blue arrow pointing to the right. Inside the arrow, the words "NOAA CORIS" are written in white, uppercase, sans-serif font. The "O" in "NOAA" is stylized with a white outline.

**Draft environmental impact statement : sanctuary expansion / National Oceanic and Atmospheric Administration, Office of National Marine Sanctuaries.**

In accordance with the National Environmental Policy Act (NEPA, 42 U.S.C. 4321 et seq.) and the National Marine Sanctuaries Act (NMSA, 16 U.S.C. 1434), the National Oceanic and Atmospheric ...

**Supplementary Materials: An Assessment of Mobile Predator Populations along Shallow and Mesophotic Depth Gradient in the Hawaiian Archipelago**

Large-bodied coral reef roving predators (sharks, jacks, snappers) are largely considered to be depleted around human population centers. In the Hawaiian Archipelago, supporting evidence is ...

**Supplemental environmental assessment for deep sea research within the northwestern Hawaiian Islands : Papahānaumokuākea Marine National Monument, Northwestern Hawaiian Islands, Hawai'i / Tia Brown, [preparer] ; National Oceanic and Atmospheric Administration National Ocean Service, Office of National Marine Sanctuaries.**

**Global Coral Bleaching 2014-2017 Status and an Appeal for Observations**

In 2014 we wrote in 'Reef Encounter' about the prospect for a 2014-15 El Nino (Eakin et al. 2014). While that El Nino never fully formed, it helped set off the ongoing multi-year global coral bleaching event. A subsequent 2015-16 strong El Nino formed, spreading and ...

**NOAA Deep-Sea Coral Research and Technology Program : priority scoping workshop report for the DSCRTP Southeast Research Initiative 2016-2019 / by Jennifer Schull, Peter Etnover, Daniel Wagner.**

The National Oceanic and Atmospheric Administration (NOAA) Deep-Sea Coral Research and Technology Program (DSCRTP) was launched in 2009 ...