

Performance Progress Report
Developing the Pacific Islands Ocean Observing System (PacIOOS)
Cooperative Agreement # NA16NOS0120024
Performance Period: December 1, 2021 through May 31, 2022

Submitted June 2022 by:
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This report covers activities conducted during the twelfth 6-month performance period of a 7-year cooperative agreement. PacIOOS' estimated operating budget for the approved no-cost extension from NOAA IOOS was \$3,884,594.

1.0 Progress and Accomplishments

OUTREACH, STAKEHOLDER ENGAGEMENT, AND EDUCATION SUBSYSTEM

Conduct Outreach and Engagement and Build Capacity in the Insular Pacific; Target completion date: May 2023 **Status:** *Ongoing. The PacIOOS liaison team has grown during the reporting period. In addition to the new capacity building liaison officer based in Pohnpei, PacIOOS has contracted two non-governmental organization: Pacific Coastal Research and Planning (PCRP) in CNMI, and Micronesian Conservation Coalition on Guam, to serve as part-time liaisons for PacIOOS. We are also working on forging a similar partnership on Guam. Our inaugural regional coordinator based on Pohnpei retired from PacIOOS at the end of May, and he has helped bring on board the Conservation Society of Pohnpei (CSP) to serve as PacIOOS liaison in the Federated States of Micronesia (FSM). Each of these new partners will help us conduct outreach and capacity building in the region, however, the region is not quite back to fully in-person meetings, as the islands seem to be lagging behind the U.S. mainland in terms of re-normalizing such activities.*

Characterize the ocean data needs for the Pacific Islands Region (specific to the target audience of coastal resource managers); Target completion date: Spring 2022. **Status:** *In progress, completion delayed. New target completion date:* September 2022. *The consultant (ecoLOGIC Consulting) has completed a policy analysis of management and policy decisions related to data sets and tools needed by coastal zone managers in Hawai‘i, American Samoa, the Commonwealth of the Northern Mariana Islands, and Guam. PacIOOS, OCM, and the consultant met with the coastal managers as a group and drafted goals and action steps to address data challenges for priority management issues and determine next steps for implementation. The consultant has drafted a report based on the workshop. Meeting with the steering committee and initializing next steps have been delayed due to sudden family emergencies. The consultant is coordinating with PacIOOS and NOAA OCM staff to move this forward more in summer and fall 2022.*

Implement one or more projects in the Pacific Islands Ocean Data Needs report; Target completion date: May 2023 **Status:** *Delayed.* The report being developed by the consultant will guide the remaining implementation of the project, through the remainder of the award. During this reporting period, PacIOOS developed an interactive web map to view individual layers and zoom to the target geography for the previously reported project with USGS Western Geographic Science Center to identify locations of current and future areas of coral reef resilience in Guam and American Samoa. A manuscript on the project is also currently in review for publication. <http://www.pacioos.hawaii.edu/projects/coral-resilience-guam-amsam/>

OBSERVING SUBSYSTEM

Re-deploy, Majuro (RMI) Wave Buoys; Target completion date: November 2021 **Status:** *Delayed.* **New target completion date:** September 2022. The Marshall Islands has yet to open up to travel again (due to covid) to enable our team redeploy the Majuro wave buoy. We were exploring options for our PacIOOS liaison to support a wave buoy deployment, but before all the necessary paperwork (for him to be on a local vessel) was in place, he accepted a federal position with NOAA in American Samoa. The team is regrouping yet again, and working to support our local partner at the Majuro National Weather Service Office to deploy the buoy. <http://www.pacioos.hawaii.edu/waves-category/buoy/>

Deploy new wave buoys in the Freely Associated States; Target completion date: May 2023 **Status:** *Delayed.* The buoys for this objective have been purchased and received. We continue to wait for the new hire's approval of her visa application, but in the meantime, other parts of the team are working on this project part time to do what they can to move it forward. Ongoing travel restrictions continue to impact the progress of this project as well. As mentioned above, the RMI is still closed to travel, as is the FSM. We were able to support the deployment of a new wave buoy in Palau in May 2022. While the funding for the buoy was provided by UNDP, funding to PacIOOS through IOOS supported the personnel and travel to deploy and train NWSO staff in Palau on buoy operations and maintenance. <http://www.pacioos.hawaii.edu/latest-news/new-wave-buoy-palau/>

Deploy new wave buoy in American Samoa; Target completion date: November 2022 **Status:** *In progress.* Discussions with partners continued during this reporting period. Next steps include expanded discussions with partners and stakeholders before the end of June. Once we have the planned coordinates, we will submit the necessary permit applications.

Deploy new HFR stations on CNMI and Guam; Target completion date: May 2023 **Status:** *In progress.* The systems have been purchased and fabricated and are ready for shipment. During this reporting period, we secured a permit with the USFWS on Guam to locate one of the sets of antennae, but the other desired location was deemed by the US Marine Corps to not be permissible due to plans for a firing range at the location. The team now needs to reassess location option for the other set of antennae on Guam as well as locations in CNMI, specifically Rota. Progress has been slow, as visa issues made it impossible for our main technical staff person to legally work at all. He has just received his green card, though, and is busy bringing

our existing systems back online. Restrictions on travel and covid concerns in the islands also remain barriers for Guam and CNMI.

Run glider missions; Target completion date: May 2023 **Status:** *Planned for next reporting period. The PacIOOS Seaglider facility has been set up, a short test run of the glider to ensure functionality was accomplished, and a route has been planned and permitted. We plan to run a glider mission in the late fall/early winter 2022 in order characterize the large phytoplankton blooms that occur off the Maui Nui island group in the Hawaii ROMS output.*

DATA MANAGEMENT AND CYBERINFRASTRUCTURE (DMAC) SUBSYSTEM

Complete PacIOOS DMAC server migration; Target completion date: May 2022 **Status:** *Complete.*

RESEARCH AND DEVELOPMENT SUBSYSTEM

Deploy an array of oceanographic satellite tags on large pelagics in the Main Hawaiian Islands; Target completion date: May 2022 **Status:** *Delayed. The team did not tag additional sharks during this reporting period for two main reasons. The weather has not been conducive for safe and effective tagging, and the team is waiting for new from Wildlife Computers. The team currently has a paper in review that covers the topic of using oceanographic data transmitted by sharks. <http://www.pacioos.hawaii.edu/projects/sharks/>*

2.0 Scope of Work

No changes to the project scope of work are anticipated. Remaining objectives/deliverables are those included in the NOAA-approved no cost extension.

3.0 Personnel and Organizational Structure

The PacIOOS Operations Coordinator returned to work full-time mid-February 2022.

4.0 Budget Analysis

Spending for this award is on track with projected program expenditures. The University of Hawai'i Office of Research Services submitted a semi-annual financial report for the period ending March 31, 2022, through Grants Online. That report shows total receipts of \$13,452,241.94. As of June 1, 2022, internal budget tracking shows expenditures of \$13,564,831.40, representing a drawdown of 88.9% of the federal funding for this 7-year award.

Addendums

As recommended by the IOOS Office, addendums are not included with this progress report; they will be included with the progress report due in July for our new NA21 award.