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The National Oceanic and Atmospheric Administration (NOAA) formed the National Centers for Coastal Ocean Science (NCCOS) in 1999 as the focal point for NOAA’s coastal ocean science efforts. We provide coastal managers with the scientific information necessary to decide how best to protect environmental resources and public health, preserve valued habitats, and improve the way communities interact with coastal ecosystems.

NCCOS Forecasts, Funding, Research Help South Florida Address Harmful Algal Blooms

NCCOS is doing several things to help south Florida address both saltwater and freshwater harmful algal blooms. This year, south Florida experienced the worst red tide in more than ten years. During the summer, this harmful algal bloom extended roughly 130 miles along the southwest Florida coast, detrimentally affecting the local economy and human and animal health. Among the health impacts, red tide toxins became airborne through wave action and caused respiratory irritation in people and animals. In response, NCCOS and its partners developed a risk level forecast for red tide respiratory irritation on Pinellas County beaches.

Relatively Mild Lake Erie HAB Season Comes to an End

October marked the end of the summer harmful algal bloom (HAB) season on Lake Erie. The 2018 Microcystis bloom had a final severity index (SI) of 3.6, much milder than last year’s severe bloom with an SI of 8. The severity index captures the amount of bloom biomass over the peak 30 days of the bloom. The bloom was smaller than the July forecast with an SI of 6, and all models overestimated the bloom to some degree (a range from 4.9 to 7.8). The reasons for the overestimates of the several models will be reviewed and updated along with continuing a strategy for creating an ensemble forecast based on past experience.
Summer 'Dead Zone' Smaller than Average in Gulf of Mexico

NOAA-supported scientists, led by partners at the Louisiana Universities Marine Consortium and Louisiana State University, have determined that this year’s Gulf of Mexico “dead zone”—an area of low oxygen that can kill fish and marine life—is approximately 2,720 square miles, an area about the size of Delaware. This is considerably smaller than the 5,460-square-mile average measured over the past 34 years.

Coral Surveys Inform Expansion of Pulley Ridge Habitat Area of Particular Concern

In June, the Gulf of Mexico Fisheries Management Council voted to expand the Pulley Ridge Habitat Area of Particular Concern (HAPC), located roughly 150 miles off Florida’s southwest coast. The expanded area extends fishing restrictions to the east and south of the HAPC’s previous boundaries. The decision is timely, as a recent NCCOS-funded study has shown that the Pulley Ridge HAPC has sustained a 92 percent loss of coral cover in the past 10 years.
NCCOS, Partners Publish Environmental Assessment of Kenai Peninsula Bays, Fjords
NCCOS and its partners have published an environmental assessment of the bays and fjords on the Kenai Peninsula in Alaska. The report is intended primarily for state fisheries and water quality officials in need of habitat condition information to manage the region’s natural resources. The peninsula is an important hub for commercial, recreational, and subsistence fisheries, and an abandoned mining site in the region was a concern for the state. Continue reading

NCCOS, USACE Help Marines Keep Pace with Sea Level Rise at Camp Lejeune (video)
Salt marshes are an important part of coastal ecosystems. They provide habitat for wildlife, clean the water by filtering toxins and nutrients out, and help protect coastal infrastructure by absorbing wave energy during storms. Sea level rise, shoreline erosion, and pond formation threaten salt marsh habitat at Marine Corps Base Camp Lejeune in North Carolina. Scientists from NOAA’s National Centers for Coastal Ocean Science (NCCOS) and staff from the U.S. Army Corps of Engineers (USACE) are providing the Base with data and strategies to address the problem. Continue reading

Report Describes Socioeconomics of Human Communities Adjacent to Guam’s Coral Reefs
The National Coral Reef Monitoring Program (NCRMP) recently published human dimension information related to Guam’s coral reef resources. As part of its mission, NCRMP is responsible for gathering and monitoring a collection of socioeconomic indicators in the seven priority U.S. coral reef jurisdictions. Household surveys from February to July of 2016 revealed that Guam residents generally supported a range of potential marine management policies and regulations (such as permit and certification requirements for water sports tour operators, and size limits for certain fish species), and suggested moderate familiarity with the various threats faced by coral reefs (such as pollution, overfishing/harvesting, and climate change). Continue reading
NCCOS Participates in Endangered North Atlantic Right Whale Scenario Planning
Representatives from several federal agencies met this past summer to discuss how to reverse the recent decline of the North Atlantic Right whale population. The North Atlantic Right whale is one of the most endangered of all large whales. Estimates place the current global population at 458 whales, with a consistent decline since the 2010 estimate of 483. This decline and the large number of Right whale deaths documented in 2017 prompted the North Atlantic Right Whale Scenario Planning Project meeting sponsored by NOAA's National Marine Fisheries Service (NMFS). Continue reading

Newly Released Decision Support Tool for Ecological Indicators in the Northern Gulf of Mexico
One of NOAA RESTORE Science Program's first funded projects, Ecological Resilience Indicators for Five Northern Gulf of Mexico Ecosystems, has published it's final report and web-based decision support tool. The project used an innovative Ecological Resilience Framework (see figure below) that integrates information on key ecosystem threats (drivers), ecological integrity, and ecosystem services to develop a comprehensive set of ecological resilience indicators for salt marsh, mangrove, seagrass, oyster, and coral ecosystems in the northern Gulf of Mexico. Ecological indicators serve as proxies for characterizing key attributes of ecosystem components. Continue reading