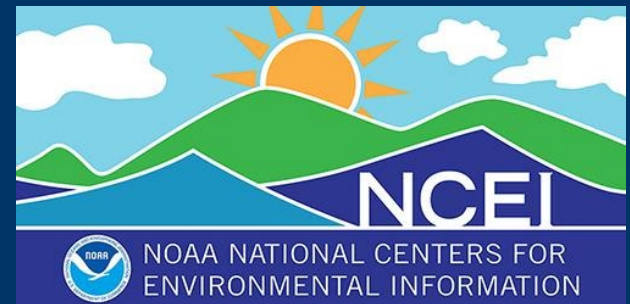


CoRIS the Evolution of a Data Management Program

Sarah O'Connor & Zack Mason



NOAA
CORAL REEF
CONSERVATION PROGRAM



CRCP Mission and Focus

Mission: To support effective management and sound science to preserve, sustain, and restore valuable coral reef ecosystems for future generations



We focus on the three biggest global threats + restoration:

- **CRCP Strategic Plan**
- **Grants and Cooperative Agreement Programs**

Where We Work



NOS

NCCOS

- Atlantic Reef Monitoring
- Atlantic Mapping
- Water quality
- Coral Physiology

OCM

- Grants Management
- Management Liaisons
- Socio-Economic Program Coordination
- NCRMP Coordination
- LBSP Coordination
- Climate Coordination
- International Program
- NOAA/USAID IAA

ONMS

- Florida Keys NMS
- Flower Garden Banks NMS
- Fagatele Bay NMS
- Papahānaumokuākea MNM
- MPA Center

NMFS

PIFSC

- Pacific Reef Monitoring
- Pacific Reef Climate
- Pacific Mapping
- Socioeconomic Studies

SEFSC

- Atlantic Reef Monitoring
- Coral Biology
- Fisheries Science
- Socioeconomic Studies

PIRO

- Pacific Fishery Liaisons
- Watershed Restoration
- Local Capacity Building

SERO

- Atlantic Fishery Liaisons
- ESA species recovery
- Education & Outreach
- Local Capacity Building

OHC

- Program Coordination
- Coral & Watershed Restoration

OAR

AOML

- Atlantic Reef Climate
- Water Quality
- Coral Ecology and Fisheries Research

OAP

- Climate and Reef Monitoring

OER

- CRCP HQ Support

PMEL

- Ocean Monitoring

NESDIS

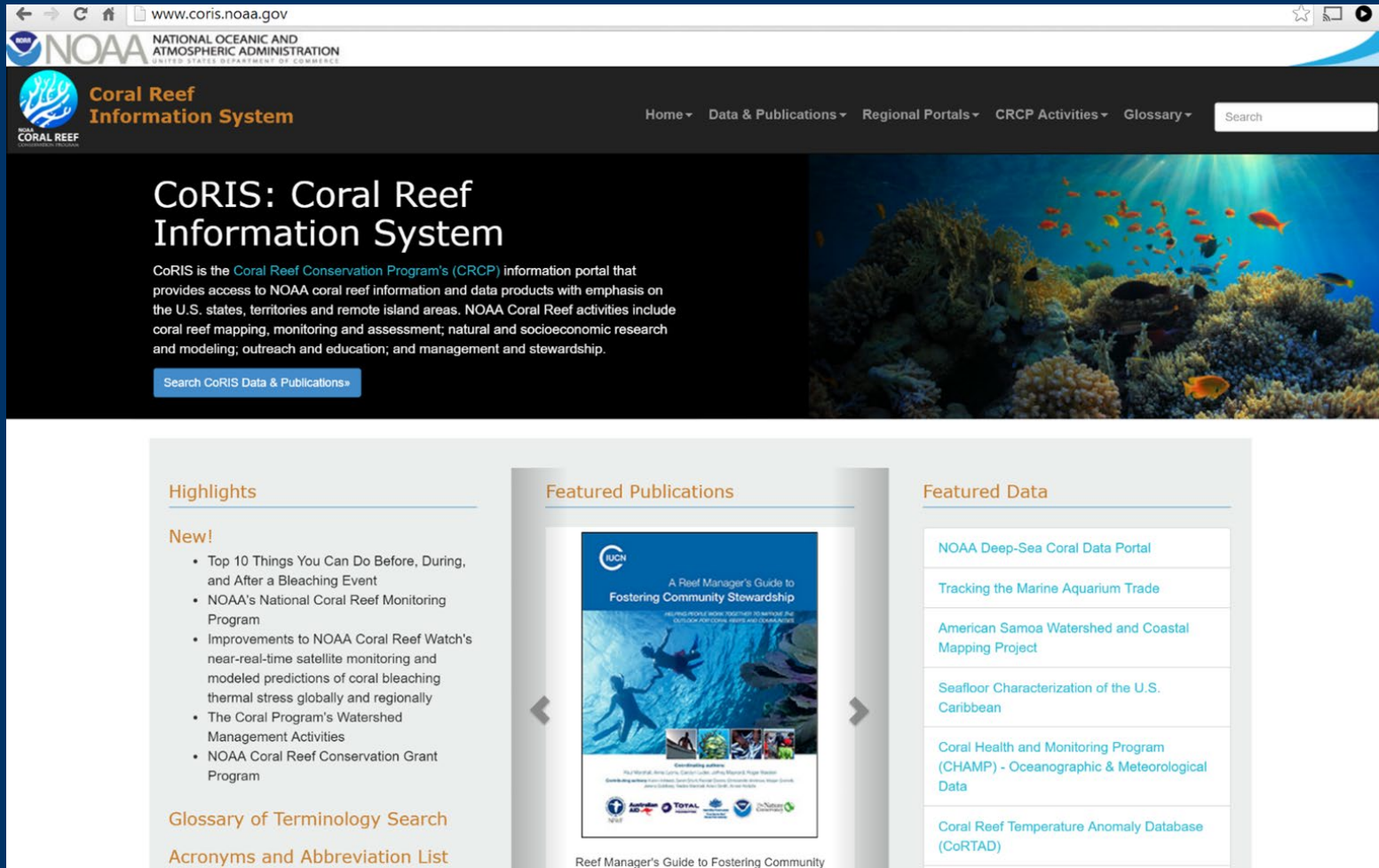
NCEI

- CRCP Data Management
- CRCP HQ Support
- Coral Reef Information System (CoRIS)

STAR

- Coral Reef Watch

Coral Reef Information System (CoRIS)



www.coris.noaa.gov

NOAA NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION UNITED STATES DEPARTMENT OF COMMERCE

NOAA CORAL REEF

Coral Reef Information System

Home Data & Publications Regional Portals CRCP Activities Glossary Search

CoRIS: Coral Reef Information System

CoRIS is the Coral Reef Conservation Program's (CRCP) information portal that provides access to NOAA coral reef information and data products with emphasis on the U.S. states, territories and remote island areas. NOAA Coral Reef activities include coral reef mapping, monitoring and assessment; natural and socioeconomic research and modeling; outreach and education; and management and stewardship.

Search CoRIS Data & Publications

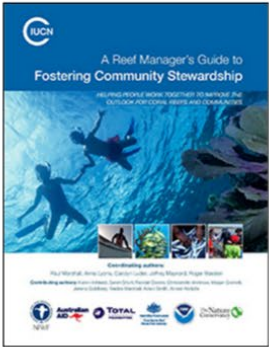
Highlights

New!

- Top 10 Things You Can Do Before, During, and After a Bleaching Event
- NOAA's National Coral Reef Monitoring Program
- Improvements to NOAA Coral Reef Watch's near-real-time satellite monitoring and modeled predictions of coral bleaching thermal stress globally and regionally
- The Coral Program's Watershed Management Activities
- NOAA Coral Reef Conservation Grant Program

Glossary of Terminology Search
Acronyms and Abbreviation List

Featured Publications



A Reef Manager's Guide to Fostering Community Stewardship

Reef Manager's Guide to Fostering Community

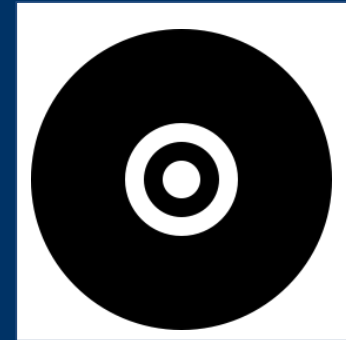
Featured Data

- NOAA Deep-Sea Coral Data Portal
- Tracking the Marine Aquarium Trade
- American Samoa Watershed and Coastal Mapping Project
- Seafloor Characterization of the U.S. Caribbean
- Coral Health and Monitoring Program (CHAMP) - Oceanographic & Meteorological Data
- Coral Reef Temperature Anomaly Database (CoRTAD)

CRCP Data & Publications

Data

- *In situ* observations and measurements
 - Biological, chemical, atmospheric, etc.
- Satellite data and products
- Ocean & Atmospheric models
- Aerial Imagery
- Bathymetry / Shoreline
- Surface Currents
- Digital Video Observations
- Paleoclimate (Coral Cores)
- Socioeconomic



Publications

- Journal Articles
- NOAA Technical Memoranda
- Unpublished Scientific Reports
- Educational & Outreach Materials
- Websites
- Conference Proceedings / Workshop Reports

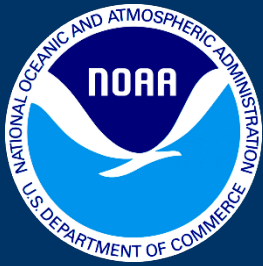


Federal Data Policy

- **Public Access to Research Results (PARR)**



The Obama Administration is committed to the proposition that citizens deserve easy access to the results of research their tax dollars have paid for. That's why, in a policy memorandum released today, OSTP Director John Holdren has directed Federal agencies with more than \$100M in R&D expenditures to develop plans to make the results of federally funded research freely available to the public—generally within one year of publication.



NOAA Procedural Directives

- **Data access**
 - All data must be made available one year after the time of collection and made accessible until deemed useless
- **Data documentation**
 - Metadata and associated documentation
- **Data management plan**
 - All data should be covered by a data management plan
- **Publication policy**
 - All federally funded research publication will be made publicly available one year after publication



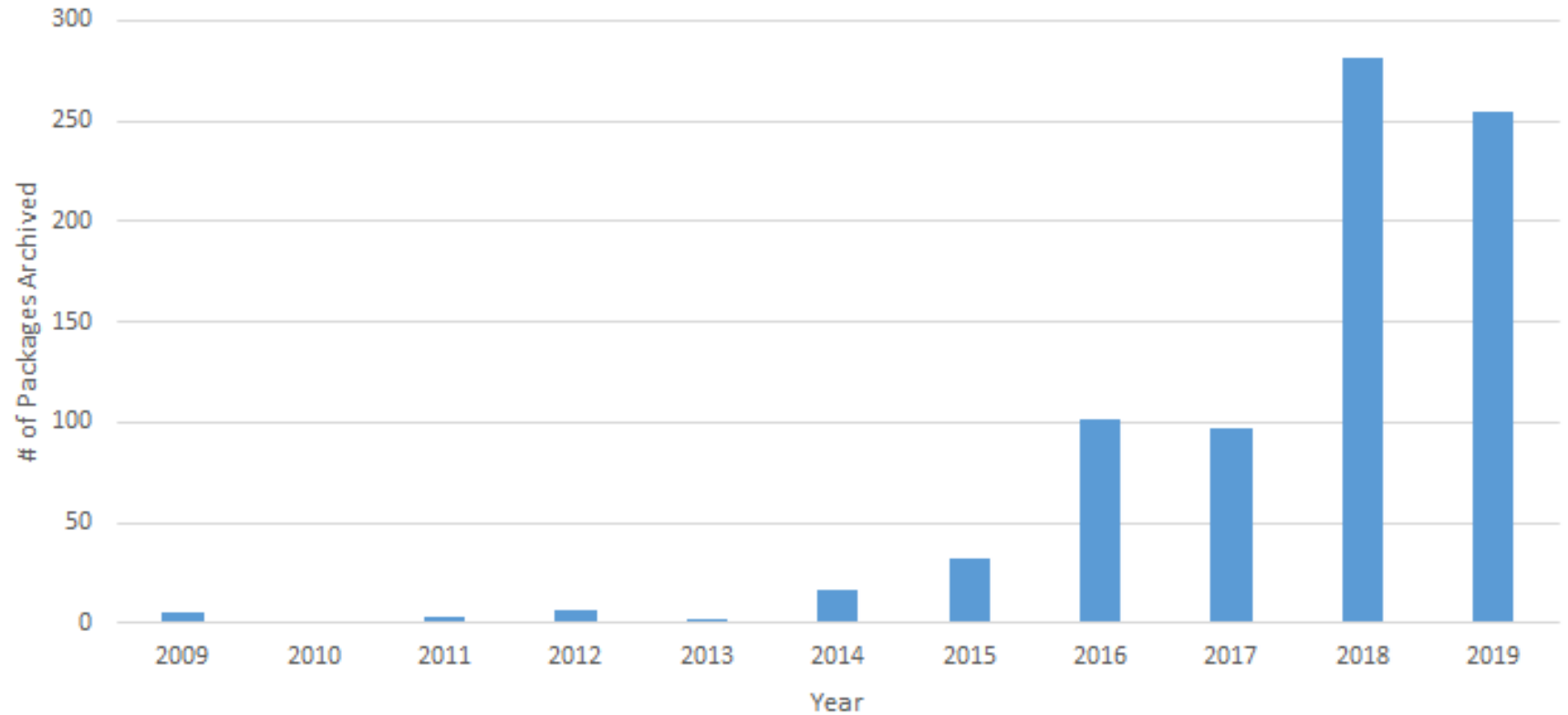
What this all means

- Data must be archived and made accessible in a timely manner

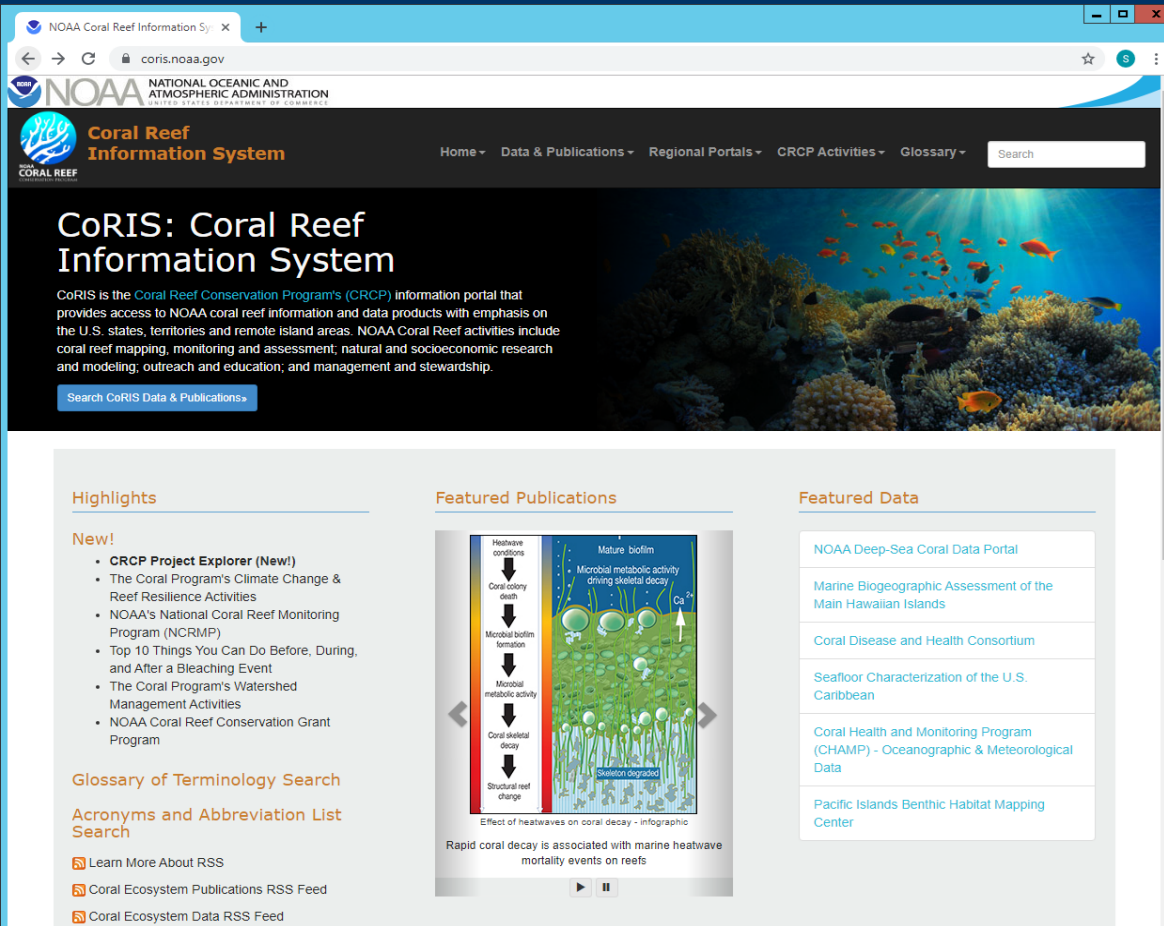


- Proper metadata and documentation is needed to make the data understandable.

Coral Reef Studies Data Archived with NCEI



Coral Reef Information System



NOAA Coral Reef Information System

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
UNITED STATES DEPARTMENT OF COMMERCE

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Search CoRIS Data & Publications

Highlights

New!

- **CRCP Project Explorer (New!)**
- The Coral Program's Climate Change & Reef Resilience Activities
- NOAA's National Coral Reef Monitoring Program (NCRMP)
- Top 10 Things You Can Do Before, During, and After a Bleaching Event
- The Coral Program's Watershed Management Activities
- NOAA Coral Reef Conservation Grant Program

Glossary of Terminology Search

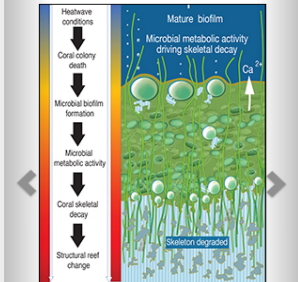
Acronyms and Abbreviation List Search

Learn More About RSS

Coral Ecosystem Publications RSS Feed

Coral Ecosystem Data RSS Feed

Featured Publications



Effect of heatwaves on coral decay - infographic

Rapid coral decay is associated with marine heatwave mortality events on reefs

Featured Data

- NOAA Deep-Sea Coral Data Portal
- Marine Biogeographic Assessment of the Main Hawaiian Islands
- Coral Disease and Health Consortium
- Seafloor Characterization of the U.S. Caribbean
- Coral Health and Monitoring Program (CHAMP) - Oceanographic & Meteorological Data
- Pacific Islands Benthic Habitat Mapping Center

- Featuring new content on the homepage monthly
- Highlighting key publications including journal articles
- Featuring projects
- Building project based websites.

Featured Publication Pages

The screenshot displays the NOAA Coral Reef Information System website. The header includes the NOAA logo and the text 'NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION UNITED STATES DEPARTMENT OF COMMERCE'. Below this is the 'Coral Reef Information System' title and a navigation menu with links: Home, Data & Publications, Regional Portals, CRCP Activities, and Glossary. A search bar is also present. The main content area features the title 'The Octocoral Fishery in the Southeastern U.S. and Gulf of Mexico' under the 'FEATURE PUBLICATIONS' section. A photograph of an octocoral colony is shown, with a caption 'Photograph of an octocoral colony' and a 'View Full Article' button. To the right, a 'Featured Coral Archive' section lists various publications from 2019, including 'Rapid coral decay is associated with marine heatwave mortality events on reefs', 'The Octocoral Fishery in the Southeastern U.S. and Gulf of Mexico', 'Coastal Turbidity on the Southeast Florida Shelf - Monitoring Turbid Water Sources and Fates by Satellite', 'National Coral Reef Monitoring Program Socioeconomic Monitoring Component: Summary Findings for USVI, 2017', 'National Coral Reef Monitoring Program Socioeconomic Monitoring Component: Summary Findings for CNMI, 2016', and 'Assessing the Resilience of Leeward Maui Reefs to Help Design a Resilient Managed Area Network'. A list of years from 2018 to 2002-2006 is also visible.

- Highlight key Program activities on a monthly basis
- Summarize findings for the general public increasing the potential audience for scientific results
- Advertised through social media increasing the reach of our scientific work

Featured Project Pages

NOAA's Coral Reef Information System

coris.noaa.gov/activities/projects/climate/

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
UNITED STATES DEPARTMENT OF COMMERCE

Coral Reef Information System

Home Data & Publications Regional Portals CRCP Activities Glossary Search

HOME > ACTIVITIES > FEATURED PROJECTS > THE CORAL PROGRAM'S CLIMATE CHANGE & REEF RESILIENCE ACTIVITIES

The Coral Program's Climate Change & Reef Resilience Activities

Climate change is the greatest global threat to coral reef ecosystems. As temperatures rise, mass coral **bleaching** events and infectious **disease** outbreaks are becoming more frequent. Additionally, carbon dioxide absorbed into the ocean from the atmosphere has already begun to reduce calcification rates in reef-building and reef-associated organisms by altering seawater chemistry through decreases in pH. This process is called **ocean acidification**. Climate change will also affect coral reef ecosystems, through sea level rise, changes to the frequency and intensity of tropical storms, and altered ocean circulation patterns. When combined, all of these impacts dramatically alter ecosystem function, as well as the goods and services coral reef ecosystems provide to people around the globe. You can view and download an infographic on how climate change dramatically affects coral reef ecosystems at this [NOAA Oceans Service website](#).

The NOAA Coral Reef Conservation Program is actively working with its partners to address the impacts of climate change and ocean acidification on coral reef ecosystems. The Program promotes resilience-based management as the best strategy to achieve management goals in a changing climate. Resilience-based management involves using knowledge of current and future drivers of ecosystem condition and function to identify, prioritize, and adapt management actions that sustain ecosystem resilience and human wellbeing.

The CRCP supports research, management and capacity building projects and programs that increase the capacity of the coral reef jurisdictions to address the threat of climate change. This webpage collates and profiles these projects, providing access to tools and toolkits, maps, articles, reports, guides and educational outreach materials the Program has invested in over recent years and continues to support with our many partners.

Projects have been grouped into three areas of focus: understanding past, present and projected future impacts to coral reefs caused by coral bleaching, assessing and understanding likely social and ecological responses to climate change, and, identifying and prioritizing management actions to support ecosystem resilience and human wellbeing.

- Coral Reef Resilience Research and Management: Past, Present and Future (2015)

Understanding past, present and projected future impacts to coral reefs

History of Thermal Stress on Reefs

CORAL BLEACHING

Have you ever wondered how a coral becomes bleached?

HEALTHY CORAL: Healthy coral has a symbiotic relationship with zooxanthellae, which provide it with food and color.

STRESSED CORAL: As water temperatures rise, the coral becomes stressed and the zooxanthellae leave the coral.

BLEACHED CORAL: Without zooxanthellae, the coral loses its color and becomes white. It is now bleached.

CLIMATE CHANGE & REEF RESILIENCE ACTIVITIES

- History of Thermal Stress on Reefs
- Near-real-time Monitoring & Seasonal Outlooks
- Climate Modeling
- Reef Resilience Assessments
- Local Early Action Planning
- Corals & Climate Adaptation Planning
- Reef Resilience Toolkit
- Outreach Materials

- Highlight projects and thematic focus areas for the program.
- Related publications and data are packaged together to facilitate discovery & access
- Incorporates canned searches of the catalog for related materials

CoRIS Mini Project Websites

- Project websites provide access options not available from home office.
- Summarize results and provide access to data and publications
- Access to this service is only open to projects with open data

The screenshot shows the NOAA Coral Reef Information System (CoRIS) website. The header includes the NOAA logo and the text 'NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION UNITED STATES DEPARTMENT OF COMMERCE'. Below this is the 'Coral Reef Information System' logo and a navigation menu with links: Home, Data & Publications, Regional Portals, CRCP Activities, and Glossary. A search bar is also present. The main content area features the title 'Watershed Scale Planning to Reduce Land-Based Sources of Pollution (LBSP) for the Protection of Coral Reefs in Southeast Florida: An Overview and Data Gap Assessment'. Below the title are tabs for 'Project Overview', 'Library of Information', and 'GIS Data'. The 'Project Overview' tab is selected, displaying a summary of the project. The summary text states: 'This project provides an assessment framework for evaluating the impacts of land-based sources of pollution (LBSP) on the coral reef ecosystem in southeast coastal waters of Martin, Palm Beach, Broward, and Miami-Dade counties. Rapid population growth and intense increases in land development in this region over the past 50-100 years have put the coral reef ecosystem and supporting estuarine habitats under significant stress. Pollutants from these land-based human activities include nutrients (e.g. nitrogen and phosphorus), sediments, pathogens pharmaceutical and personal care products, and other LBSPs. These pollutants are discharged to the southeast Florida coastal ecosystem in large part in stormwater runoff (both urban and agricultural) and wastewater effluent and the management of stormwater and wastewater in southeast Florida affects the pollutants loads and ecosystem impacts. The purpose of this document is to assist the National Oceanic and Atmospheric Administration (NOAA) and other Southeast Florida Coral Reef Initiative (SEFCRI) partners in tackling the problems associated with LBSP by identifying sources of pollution, data availability and gaps, and sources of information from past planning and management activities in southeastern Florida. This report creates a watershed-based framework for understanding and assessing the pollutant sources and loads, and uses nine coastal inlets in the region as the basis for defining the contributing watersheds. This report will provide a roadmap for future LBSP-related data collection and pollution reduction efforts in southeast Florida. This project mapped the linkage of land-to-inlet by delineating watersheds or inlet contributing areas (ICAs) to the nine inlets in SE Florida. Because the topography is extremely flat and the area is threaded with highly managed water canals, normal watershed delineation tools were not useful; therefore, the project used the hydraulic database (AHED) developed by the South Florida Water Management District (SFWMD) to identify the ICA boundaries. Flow directions and flow rates in the waterways often depend on the hydrological conditions at the given time; this study focused on the contributing areas associated with the "normal" or average condition. For the Intracoastal Waterway portions of the ICAs, published volumes of tidal prisms for each inlet were used to approximate the surface areas within each inlet. The salinity control structures (SCS), which represent the most upstream extent of salinity intrusion in each estuary, were also identified. There are nine inlets in the study area that connect the Intracoastal Waterway with the Atlantic Ocean in the vicinity of the Southeast Florida coral tract. These ICAs are as follows, from north to south: 1. St. Lucie Inlet 2. Jupiter Inlet 3. Lake Worth Inlet 4. Boynton / South Lake Worth Inlet 5. Boca Raton Inlet 6. Hillsboro Inlet'. A 'Download Now' button is visible below the summary text.

CoRIS Mini Project Websites

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Title	File Name	Source	ICA Applicable
Canals in South Florida: A Technical Support Document, Appendix A: Basic Concepts, Glossary of Terms and Abbreviations	SFWMD_canals_appendix_A-C.pdf	SFWMD	All
Environmental Resource Permit Information Manual Volume IV	SFWMD ERP Information Manual_vol_iv_2012.pdf	SFWMD, 2012	All
SFWMD Facility and Infrastructure Location Index Map	SFWMD_facility_map_overview.pdf	SFWMD	All
SFWMD Watersheds Map	District_Watersheds_Map 3-19-13.pdf	SFWMD, 2013	All

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Boundaries

Download all [Boundaries data files](#) (1.5 GB). Manifest of files included in the Boundaries data package are listed below.

Title	File Name	Source	ICA Applicable
National Map Cities	citiesx010g.shp	USGS, 2014	All
Florida County Boundaries	cntbnd_jul11.shp	FDGL, 2011	All
Florida County Shore Area with Detailed Shoreline	countysore areas_jul11.shp	FDGL, 2011	All

CRCP Project Explorer

HOME > CRCP PROJECT EXPLORER PORTAL

CRCP Project Explorer Portal

This portal allows you to search for projects that are funded by [The Coral Reef Conservation Program](#). Click [here](#) for how to use the portal.

This portal contains information on projects funded since 2015.

[Additional Options](#)

Locations:

Select project location of interest. Hold "shift" key to select multiple locations

American Samoa
Commonwealth of the Northern Mariana Islands
Florida
Global
Guam
Gulf of Mexico

Category:

Select category of interest. Hold "shift" key to select multiple categories.

Climate Change
Fishing
International Project
Land-based Sources of Pollution (LBSP)
Mapping
National Monitoring

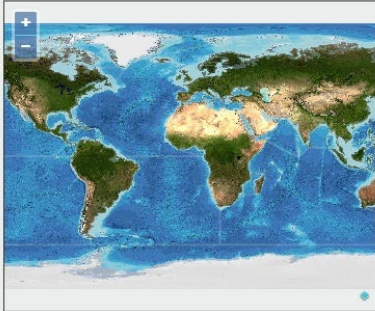
Select project year:

Choose the funding year for the project

▼ Start year

▼ End year

Hold the "shift" key and drag to select an area



North: 90

West: -180 Global East: 180

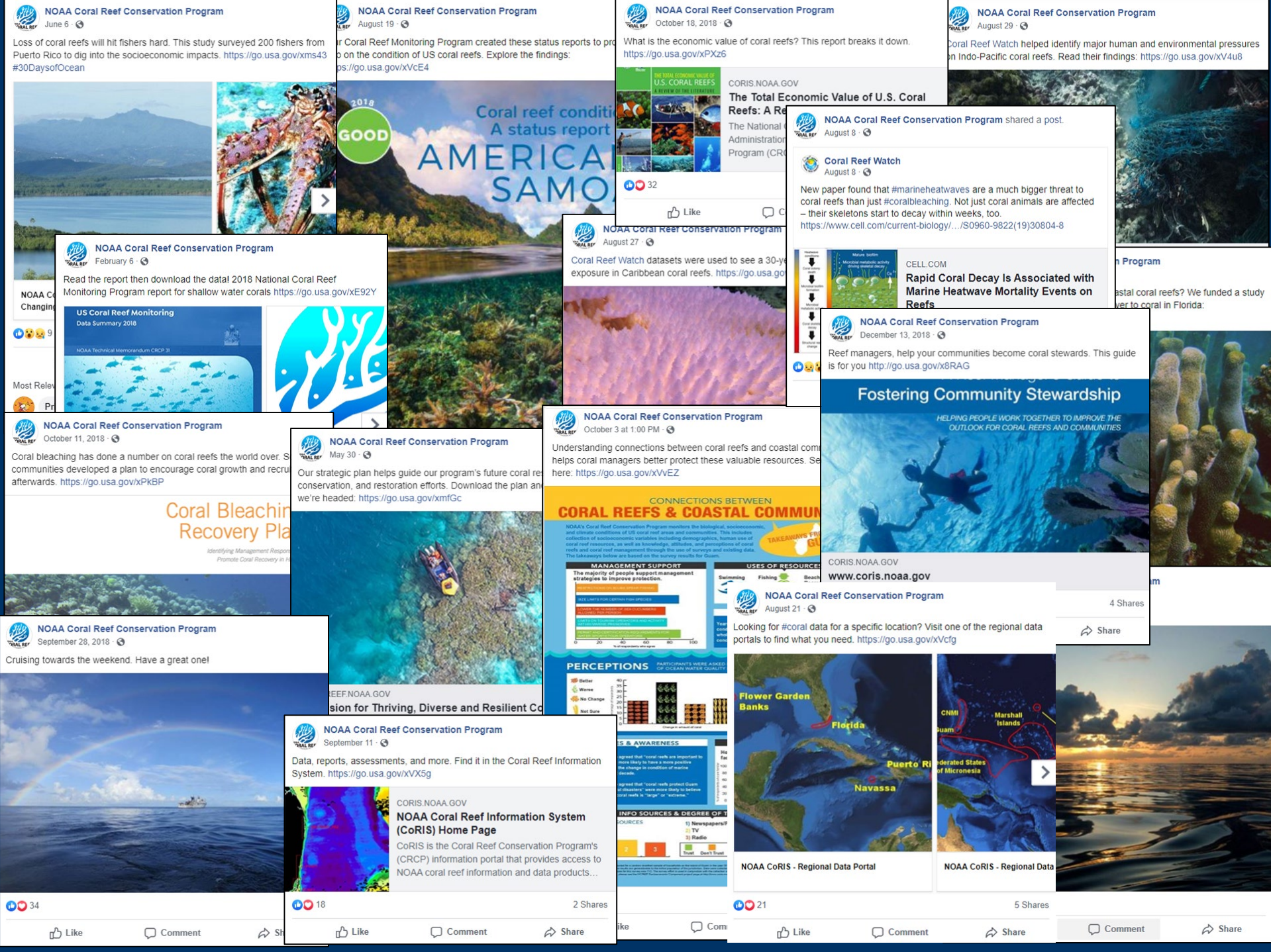
South: -90

Search Reset

- All current and past (back to FY15) project information
- Links to CoRIS to show all deliverables
- Shows current ongoing work

ERDDAP is a data server that gives you a simple, consistent way to download subsets of gridded and tabular scientific datasets in common file formats and make graphs and maps.

[illegible]





Content Drilldown

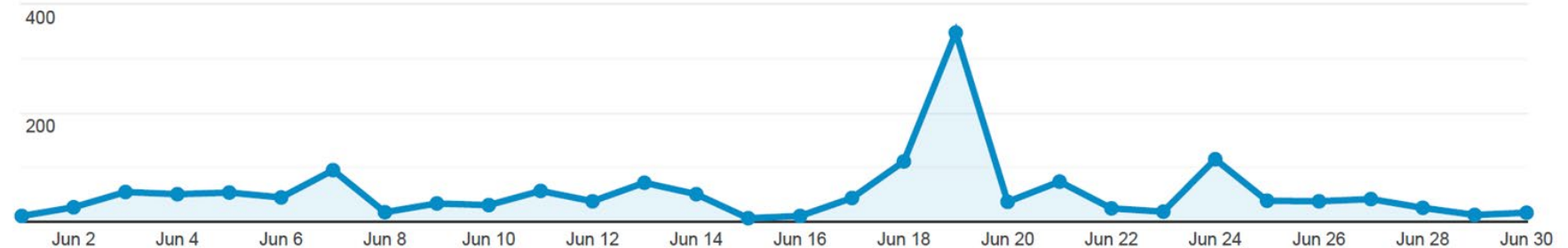
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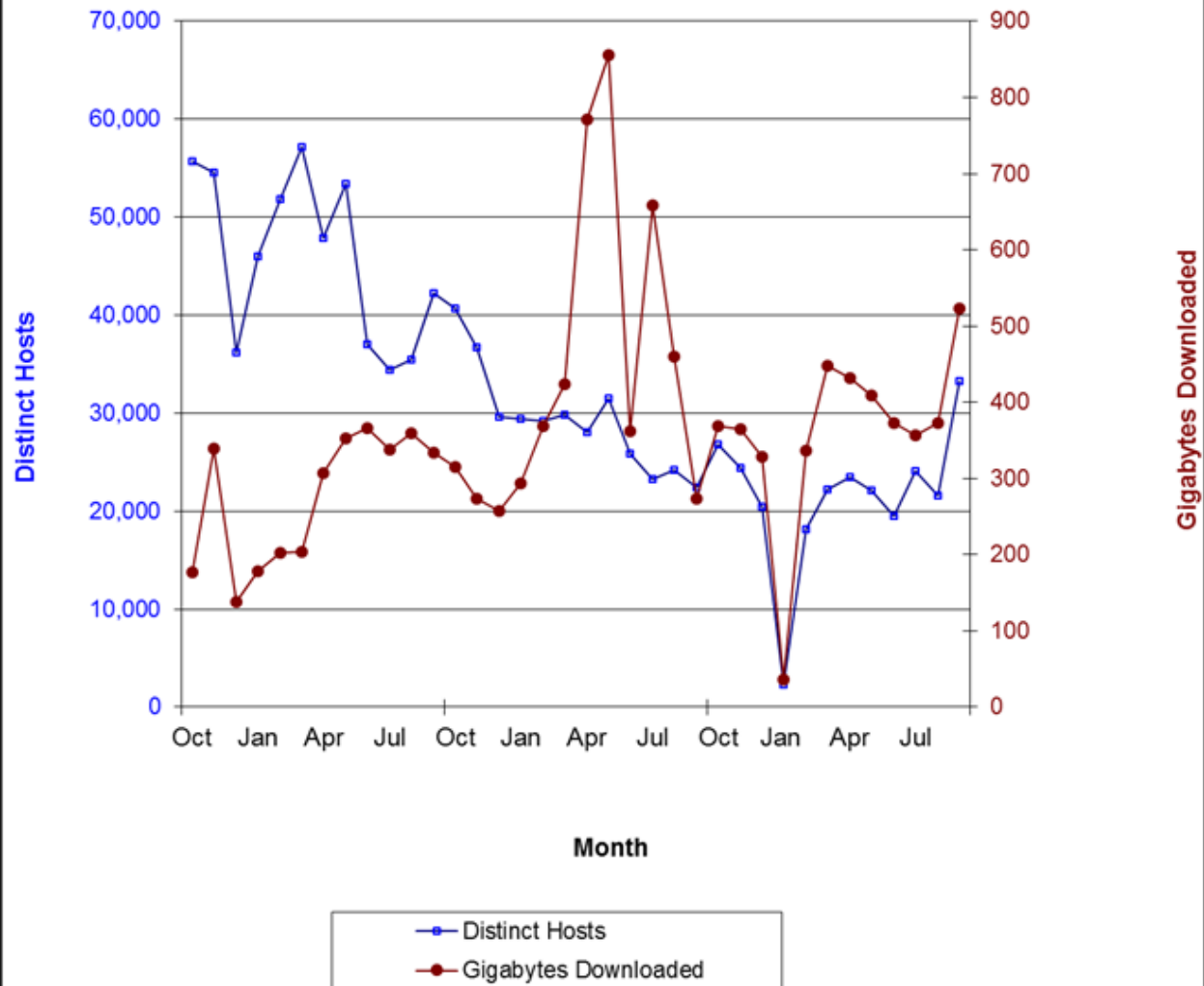
All Users
31.08% Pageviews

Explorer

Pageviews



CoRIS Web Use Trends



Thank You

