



Fiscal Year 2013 Coral Reef Information System (CoRIS) Accomplishments

Highlights

Content and Technical Improvements –

- CoRIS staff implemented a new metadata management system which allows for easier metadata updates and provides greater flexibility to handle multiple metadata standards as NOAA transitions to the ISO 19115 metadata standard.
- CoRIS staff geocoded the library catalog to allow spatial searches for publications. We are now adding spatial coordinates to library catalog records for all U.S. coral reef jurisdictions based on matching of specific terms in the record's abstract and title.
- CoRIS automated the storage of the bleaching alert emails issued for the Coral Reef Watch operational virtual stations. We had previously been asked to maintain a digital repository of past bleaching alerts. By automating the process we removed the staffing requirement needed to create and post the digital text files each time a new alert was issued.
- A search box was added to each regional portal which searches the CoRIS Geoportal for publications and metadata that are specific to that jurisdiction. We have also updated the Regional Portals to remove outdated content and add links to recent work completed by CRCP projects.

New Metadata and Data – Added 301 metadata records to CoRIS and made 4,985 record updates. At the conclusion of FY13 CoRIS had a total of 5,019 metadata records that provide users access to approximately 48,796 coral data products.

New Publications – Entered 363 publications into the CoRIS virtual library, bringing the total number of publications in CoRIS to 3,744.

Outreach – CoRIS continued work with the NOAA Ocean Acidification Team, providing guidance and review of the metadata requirements they are establishing for the program. Where possible we are trying to ensure that requirements overlap so PIs are not hit with two separate sets of requirements if funded through both programs.

Coral Program Support – Provided monthly, quarterly, and annual reports to the CRCP office on coral projects that contributed metadata, data, and publications to CoRIS. Staff continued to work with CRCP Line Officers to provide them with updates for their quarterly

calls with CRCP Project Managers to obtain status updates on 2003-2013 products that are overdue and due soon.

Collaborations – Served as a member of the CRCP Data Management Working Group, CRCP Project Proposal Database Team, Deep Sea Coral Coordination Call, and other CRCP coordination groups, NESDIS Information Resource Management Team Metadata Meeting, NODC Technical Development Team, NODC Web Team Meeting, NODC Archive Management Working Group, FGDC Metadata Working Group, NOAA Geoportal Team, and the NOAA Environmental Data Management Committee

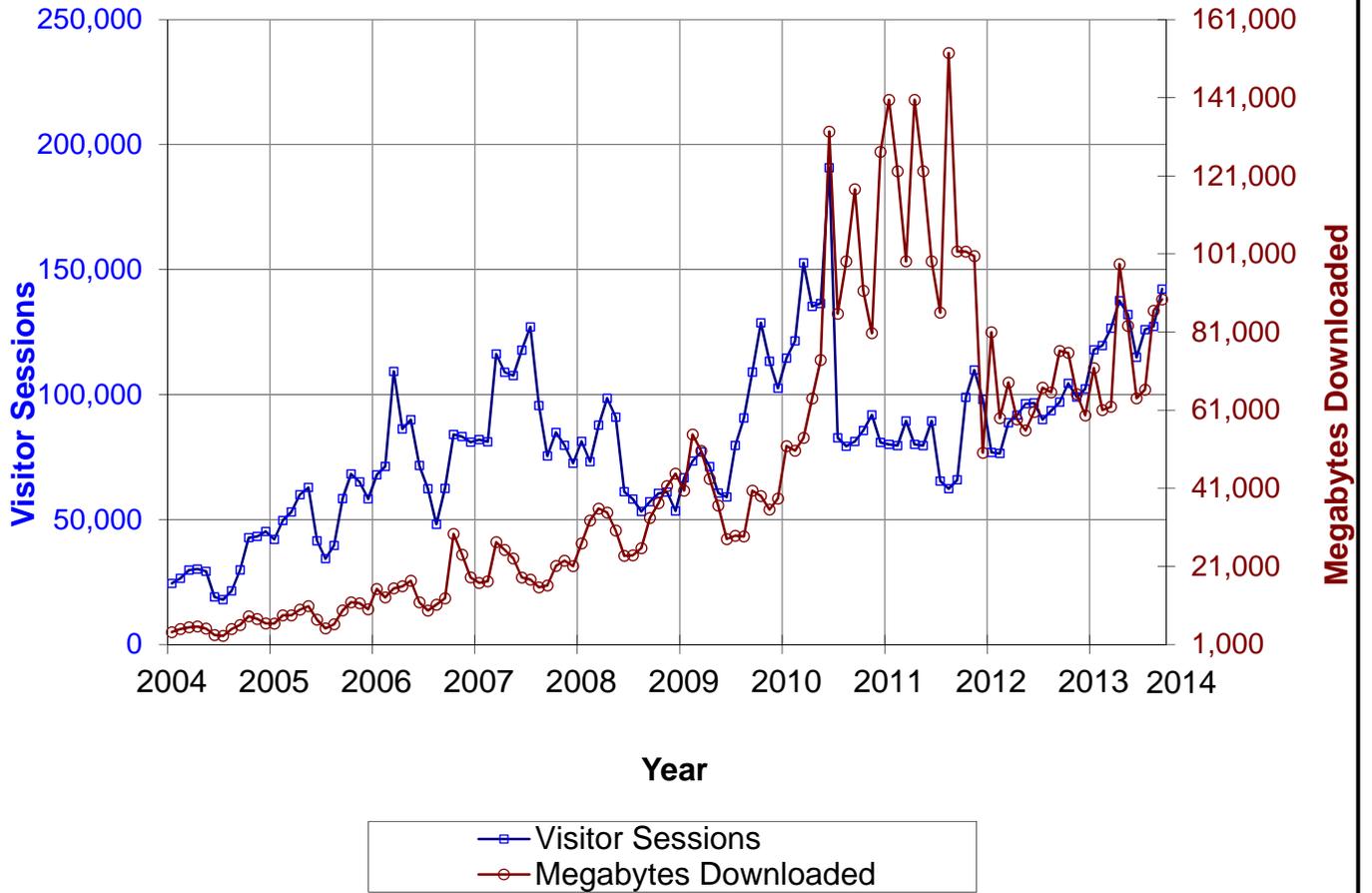
Staff Technical Development – CoRIS staff attended the NOAA Environmental Data Management Conference, ESRI Federal User Conference, Coastal Geotools and the ESIP (Earth Science Information Partnerships) conference. Staff also participated in the FGDC Metadata Summit and attended SharePoint and website development training.

Team Updates – Rost Parsons, the NODC Marine Ecosystems Team Lead, replaced Michele Newlin as the Project Manager for CoRIS.

Performance Statistics

Element	October 2012	September 2013	% Change
Number of Metadata Files	4,732	5,019	+6.07%
Number of Publication References	3,381	3,744	+10.74%
Number of Data & Information Products (including publications)	46,397	48,796	+5.17%
Number of Glossary terms	6,398	6,401	+0.05%
Number of Acronyms and Abbreviations	5,275	5,296	+0.40%

CoRIS Web Use Trends



Top Downloaded Documents

Publication Name	# of FY13 Downloads
Demographic Baseline Report of U.S. Territories and Counties Adjacent to Coral Reef Habitats - U.S. Virgin Islands Chapter	69,286
The State of Deep Coral Ecosystems of the United States: 2007	45,327
CoRIS Glossary of Terminology	36,571
A Reef Manager's Guide to Coral Bleaching	25,932
Status of Caribbean Coral Reefs after Bleaching and Hurricanes in 2005	20,183
Regulated and Protected Species in U.S. Caribbean Waters	19,804
State Of Deep Coral Ecosystems in the Gulf of Mexico Region: Texas to the Florida Straits	14,675
NOAA Coral Reef Ecosystem Research Plan for Fiscal Years 2007 to 2011	13,819
CoRIS Acronym List	12,822
Demographic Monitoring Protocols for Threatened Caribbean Acropora SPP. Corals, NOAA Technical Memorandum NMFS-SEFSC-543	12,658
Coral Reef Habitat Assessment for U.S. Marine Protected Areas: Commonwealth of Puerto Rico	10,564
Field Manual for Investigating Coral Disease Outbreaks, NOAA Technical memorandum NOS NCCOS 80, NOAA Technical Memorandum Coral Reef Conservation Program 6	10,539
State Of Deep Coral Ecosystems in the Caribbean Region: Puerto Rico and the U.S. Virgin Islands	9,877
Coral Reef Habitat Assessment for U.S. Marine Protected Areas: State of Florida: Dry Tortugas to Biscayne Bay	9,720
State of Deep Coral Ecosystems of the U.S. Pacific Coast: California to Washington	9,571

Table: This table represents the top accessed publications from the CoRIS server in FY13. A total of 757,549 publications were downloaded during the fiscal year. Note: These numbers reflect only those documents hosted by CoRIS. The catalog provides linkages to numerous files hosted on external websites.

Top Accessed Metadata Records

Metadata Record	# of FY13 Accesses
2008 IKONOS Image Vieques Puerto Rico - opo_260684_001_ps	2,321
The Coral Reef Temperature Anomaly Database (CoRTAD) Version 1 - Global, 4 km, Sea Surface Temperature and Related Thermal Stress Metrics for 1985-2005 (NODC Accession 0044419)	2,158
High Resolution Aerial Photography of Puerto Rico and the U.S. Virgin Islands, 1965-1999	1,989
National Status and Trends, Benthic Surveillance Project DNA-Xenobiotic Adducts Data, 1991, National Centers for Coastal Ocean Science	1,888
4 km NODC/RSMAS AVHRR Pathfinder Version 5 Seasonal and Annual Day-Night Sea Surface Temperature Climatologies for 1982-2009 for the Gulf of	1,825

Mexico (NODC Accession 0072888)	
1995 Quantitative Survey of the Corals of American Samoa (NODC Accession 0001972)	1,794
Landsat 7 ETM/1G satellite imagery - Hawaiian Islands cloud-free mosaics	1,694
GIS Map of Mosaiced LandSat 7 ETM+ Satellite Imagery of the Marshall Islands (NODC Accession 0067475)	1,668
Bahia Las Minas, Panama Oil Spill Assessment 1986-1991, (NODC Accession 9400033)	1,624
Caribbean Coral Reef, Seagrass and Mangrove Sites (CARICOMP), (NODC Accession 0000501)	1,570
Endangered Species and Wildlife Resources Inventory Kwajalein Atoll, U.S. Army, Republic of the Marshall Islands 1996 (NODC Accession 0000251)	1,564
Environmental Sensitivity Index (ESI) Atlas, Gulf of Mexico, Upper Coast of Texas PDFs 1996, Louisiana 2003, Mississippi 2009, Alabama 2007, Florida 1995-2003 maps and geographic information systems data (NODC Accession 0064870)	1,521
Coral and artificial reef shape files, Broward County, Florida, (NODC Accession 0000244)	1,504
ESI-VI12 Beef Island, U.K. Virgin Islands 2000 (Environmental Sensitivity Index Map)	1,495
Benthic Habitats of Puerto Rico; Photomosaic of Guayanil	1,463

Table: The above table represents the top fifteen metadata records accessed over the previous year. During FY13 a total of 4,905,297 records were accessed from the website.

Regional Portal Usage Summary

Regional Portal	FY11 – Q4	FY12 – Q1	FY12 – Q2	FY12 – Q3	FY12 – Q4	FY13 – Q1	FY13 – Q2	FY13 – Q3	FY13 – Q4	Total
American Samoa	713	598	573	918	718	928	813	559	664	6,484
CNMI	723	719	820	1,037	964	1,288	1,170	1,042	1,187	8,950
Florida	1,360	1,640	1,843	2,779	2,436	2,695	2,615	3,161	3,806	22,335
Flower Garden Banks	723	719	682	2,201	3,364	977	800	652	679	10,797
Guam	1,099	1,081	1,174	1,531	1,100	1,290	1,018	797	794	9,884
Hawaii	973	1,199	1,017	1,206	1,325	1,693	1,111	896	990	10,410
Homepage	1,123	921	857	4,683	8,424	1,626	830	874	957	20,295
Marshall Islands	928	1,125	1,147	1,374	1,472	1,719	1,160	1,025	1,133	11,083
Micronesia	635	660	601	835	693	911	790	585	546	6,256
Navassa	596	555	576	883	709	918	786	538	517	6,078
NWHI	585	583	539	874	732	914	734	530	583	6,074
Palau	621	534	520	801	664	931	793	562	599	6,025
PRIAs	663	609	608	907	769	955	879	636	692	6,718
Puerto Rico	2,566	1217	1,193	1,435	1,697	1,525	1,261	1185	1,652	13,731
Virgin Islands	769	687	724	960	809	998	866	615	695	7,123
Total	14,077	12,847	12,874	22,424	25,876	19,368	15,626	13,657	15,494	152,243

Table: The table demonstrates the number of times Regional Portal pages were accessed by visitors to the CoRIS Web site each quarter since the fourth quarter in FY 2011.

Accomplishment Details

New Data and Metadata

Number of metadata records within CoRIS by Line Office

Office/Group	Records Added in FY13	Total Records in CoRIS
NESDIS	57	318
NMFS	126	3,329
NOS	114	1,163
OAR	4	198
Miscellaneous	0	11
Total	301	5,019

Metadata records added to the CoRIS Web site (Fourth Quarter)

Source	Description	Count
NOS	Underwater Video Clip and Still Imagery for Ground Validation (GV) and Accuracy Assessment (AA) of the Florida Keys	1
OAR	Turbulent Transfer Velocity within Benthic Boundary Layer of Cheeca AOAT. 2012	1
OAR	Atlantic Ocean Acidification Test-Bed -- OA Time-Series, Cheeca Rocks, Florida Reef Tract FY2012	1
NMFS	Integrated hard and soft bottom seafloor substrate map of Rose Atoll, American Samoa combining NOAA Pacific Island Fisheries Science Center Coral Reef Ecosystem Division hard-soft substrate maps with NOAA Center for Coastal Monitoring and Assessment Biogeography Program shallow-water benthic habitat map of American Samoa.	1
NESDIS	Coastal Bend Texas - Habitat Maps	12
NESDIS	NOAA Integrated Ocean and Coastal Mapping (IOCM) true color (RGB) orthorectified mosaic image tiles, coastal Texas, 2007 - 2011	6
NESDIS	2011 NOAA Ortho-rectified Mosaic of the Port of Mobile (NODC Accession 0106341)	1
NESDIS	2010 NOAA Ortho-rectified Mosaic from Color Aerial Imagery of LAKE CHARLES (NODC Accession 0075827)	1
NESDIS	2010 NOAA Ortho-rectified Mosaic of Louisiana: Mississippi River - Baton Rouge to Southwest Pass (NODC Accession 0103945)	1
NESDIS	2010 NOAA Near Infrared Ortho-rectified Mosaic of Louisiana: Mississippi River - Baton Rouge to Southwest Pass (NODC Accession 0104414)	1
NESDIS	2010 NOAA Ortho-rectified Mosaic from Color Aerial Imagery of MISSISSIPPI RIVER - LAPLACE TO VENICE (NODC Accession 0075830 and NODC Accession 0075829)	1
NOS	Deep Coral Priority Areas - South Atlantic Bight	24
	Total Additions:	51

Table: Sample of the total metadata record additions (301) and modifications (4,985) that were made to the CoRIS metadata library in FY 2013.

Data provided by CoRIS to a NOAA National Data Center for archiving

Office	Name
NCCOS	NOAA/NOS National Centers for Coastal Ocean Science (NCCOS) /Center for Coastal Ocean Science (CCMA) benthic habitat and fish community assessment, Flower Garden Banks, Texas, 2009-2011 (NODC Accession 0104344)
NCCOS	NOAA/NOS National Centers for Coastal Ocean Science (NCCOS) /Center for Coastal Ocean Science (CCMA) benthic habitat and fish community assessment, La Parguera and Guanica, Puerto Rico, 2011-2012 (NODC Accession 0104343)
OAR	Temperature, salinity, and chlorophyll data collected aboard the RV F.G WALTON SMITH in the Florida Keys National Marine Sanctuary, Gulf of Mexico, and North Atlantic Ocean from 01/29/1998 to 08/09/2012 (NODC Accession 0092099)

New Publications in FY13

Source	Count
NESDIS	10
NMFS	71
NOS	38
OAR	9
NOAA	24
Grants	42
Miscellaneous	60
Total	254

The above table references, by Line Office, the number of CRCP-funded , other NOAA and general coral related publications, websites, presentations, posters, brochures, videos, etc. that were added to the CoRIS virtual library in FY 2013.

In FY 2013, CoRIS staff successfully added a total of 254 publications into the CoRIS virtual library and NOAA Central Library catalog. *(This total does not include coral items cataloged directly by the NOAA Library)*

Outreach Activities

- CoRIS continued collaboration activities with the NOAA Ocean Acidification Data Management team to transfer knowledge about the ISO 19115 metadata standard and assist with metadata development through the creation of topic specific templates.
- CoRIS provided a briefing on the CoRIS project to Eunice Tetteh of the Ghana Ministry of Food and Agriculture and Dr. Shachak Pe'eri from the University of New Hampshire, Center for Coastal and Ocean Mapping.
- The CoRIS team briefed the NESDIS Line Office representative about the CoRIS project and the role of CoRIS within the Coral Reef Conservation Program.
- CoRIS continued meetings with the NOS metadata coordinator to discuss CRCP and NOS metadata requirements to ensure that metadata is made available from CoRIS and the NOS website, while minimizing the impact on the individual data provider.
- CoRIS briefed staff from the NOS CIO's staff and the Coastal Services Center about the CoRIS project in general and the work we had completed in setting up the CoRIS Geoportal.

Coral Reef Conservation Program Support

- CoRIS staff began work on modifications to the CRCP Project Database which will incorporate product tracking and requests for due date extensions into one system. This work should eventually remove the redundant data entry issues that both CRCP PIs and CoRIS staff currently deal with due to the same information being maintained in two separate systems. This work is ongoing and should be completed in FY14.
- Staff continued to work with CRCP Line Officers to provide them with updates for their quarterly calls with CRCP Project Managers to obtain status updates on 2003-2012 products that are overdue and due soon.
- CoRIS prepared an annual report and three quarterly status reports detailing web use trends and highlighting project accomplishments and CRCP Project Manager submissions related to metadata, data, publications, and information products.

Collaborations

- CoRIS participates in monthly coordination calls with the PIFSC Coral Reef Ecosystem Division and quarterly calls with the NCCOS Center for Coastal Environmental Health and Biomolecular Research to discuss ongoing action items and outstanding CRCP products.
- CoRIS worked with CRED staff to build the necessary services which will allow querying and access of the CoRIS metadata catalog from their Reef Box data download tool.
- CoRIS continues to work with the NOAA Central Library to catalog CRCP publications in the larger NOAA Library system. Adding publications to the NOAA Central Library catalog increases the discoverability and access to CRCP produced work because the

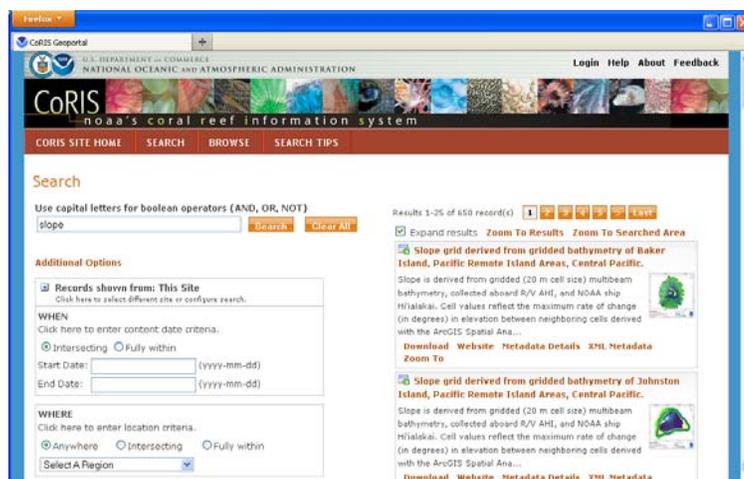
resources can be accessed nationwide through various interlibrary services available to users.

- CoRIS continues to participate as a member of the following CRCP Teams: Data Management Working Group, CRCP Project Proposal Database Team, and Deep Sea Coral Coordination Call.
- Staff attends the monthly Coral Collaboration calls.
- CoRIS participates in meetings and working groups that fall outside of the CRCP umbrella, NOAA Environmental Data Management Committee, NOAA Geoportal Team, NESDIS Information Resource Management Team Metadata Meeting, NODC Technical Development Team, FGDC Metadata Working Group, NODC Archive Management Working Group, NODC Web Team, and miscellaneous NODC Staff and Division Meetings.

Web Site Content and Technical Improvements

Data & Metadata

- In FY12 the CoRIS Geoportal was released. The new search tool added many new capabilities to the website including: temporal and spatial search, data preview capabilities, and the option to save search results. This year we completed the transition by tying into the Geoportal web services to replicate all existing capabilities from the old system and turned off the old search tool in August of this year.



- CoRIS staff developed a draft ISO 19115-2 metadata template which corresponds with the minimum metadata template CRCP had previously approved for the FGDC CSDGM standard. ISO 19115-2 is the required metadata content standard for documenting all data in NOAA. It is expected that CRCP will finalize their ISO metadata requirements in FY14. Until these requirements are finalized any ISO record which is compliant with the standard will be accepted.
- CoRIS staff made numerous additions to the CoRIS Place and Theme Keyword thesauri based on requests from CRCP PIs in NMFS and NOS. We also compiled a document which outlines the basic guidelines we follow in generating new keywords as a resource to assist PIs when requesting new terms:
http://www.coris.noaa.gov/data/pdfs/CoRIS_Keyword_Generation_guidance.pdf.

- CoRIS staff automated the storage of the bleaching alert emails issued for the Coral Reef Watch operational virtual stations. We had previously been asked to maintain a digital repository of past bleaching alerts. By automating the process we removed the staffing requirement needed to create and post the digital text files each time a new alert was issued. The bleaching alert repository can be accessed here from our website:
<http://data.nodc.noaa.gov/coris/data/NOAA/nedis/ora/SatelliteBleachingAlerts/>.
- CoRIS staff updated our underlying metadata management system to eliminate our reliance on the NOAA Metadata Management Repository (NMMR) system which is based on technology that is no longer supported by the vendor. The new system allows for easier metadata updates and provides greater flexibility to handle multiple metadata standards as NOAA transitions to the ISO 19115 metadata standard.

Regional Portal

A search box was added to each regional portal which searches the CoRIS Geoportal for publications and metadata that are specific to that jurisdiction.

In addition, CoRIS updated the Regional Portals to remove outdated content and add links to recent work completed by CRCP projects. Each regional portal page now includes links to documents including:

- Management Priorities
- Capacity Assessment Reports
- Local Action Strategies
- Watershed Management Plans
- Conservation Action Plans



Coral Publications

Geoportal Enhancements:

- Updated the publication page to include an image of the document cover, where available. The image provides a more graphical display to users to convey more information about what the document is about.



- CoRIS staff developed and added a filter for Deep Coral Ecosystem publications to the browse tree on the Geoportal. Users can now view all deep coral related publications in the catalog or search within the category to identify specific publications of interest: <http://www.coris.noaa.gov/geoportal/catalog/search/browse/browse.page>.
- CoRIS staff updated our cataloging system to include additional publication categories and fields. We also updated the requirements on several categories to better capture how publications are cited with the transition from paper to online publication formats.
- Staff completed geocoding of the library catalog to allow spatial searches for publications within the CoRIS Geoportal. We are now adding spatial coordinates to the library catalog record for all U.S. coral reef jurisdictions based on matching of specific terms in the record's abstract and title. In addition, we have enabled the use of the spatial coordinate fields in the NOAA Central Library records to allow for more exact spatial searches, regardless of location, when the data is available.
- The NOAA Central Library switched to a new cataloging system this year. CoRIS worked with Library staff to ensure that an external mechanism to access the catalog would be included in the new systems requirements. Once the transition occurred, CoRIS staff rewrote the scripts used to maintain direct access to the library catalog from the CoRIS website.

The following publications were featured on the CoRIS website in FY13:

- An assessment of chemical contaminants detected in passive water samplers deployed in the St. Thomas East End Reserves (STEER)
http://www.coris.noaa.gov/activities/steer_cont/
- Review of Programs to Protect Southeast Florida's Coral Reefs
http://www.coris.noaa.gov/activities/florida_overview_lbsp/

- Product Development Plan for the Next Generation of Satellite Remote Sensing Products for NOAA Coral Reef Ecosystem Management Activities
http://www.coris.noaa.gov/activities/crw_prod_dev_plan/
- Small Scale Experimental Systems for Coral Research: Considerations, Planning, and Recommendations
http://www.coris.noaa.gov/activities/cdhc_experimental_sys/
- NOAA Coral Reef Watch 50 km Satellite Sea Surface Temperature-Based Decision Support System for Coral Bleaching Management
http://www.coris.noaa.gov/activities/sst_satellite_decision_support/

Featured Coral Projects

CoRIS has always provided basic hosting capabilities for CRCP partners by placing data files in a web accessible folder and including the links in the metadata record. This year we expanded beyond the basic data hosting capabilities to allow CRCP partners to request webpages on the CoRIS website. This change provides greater visibility to some of the work CRCP is doing. This year we added two featured project web pages to the site.

- STEER Coastal Use Mapping Project
<http://www.coris.noaa.gov/portals/steer/>
- Socio-economic Monitoring for US Coral Reef Jurisdictions
http://www.coris.noaa.gov/activities/projects/ncrmp_socio/

Glossary/Acronym & Abbreviation List

- The *CoRIS Glossary& Acronyms* list continues to be one of the more popular portions of the website. A mobile version of this tool was added to the website at the end of FY12. In FY13 this section of the website received 77,217 visits with over 139,396 individual page views.
- Updated pdf versions of the *CoRIS Glossary& Acronym list* were made available for download. During FY13 the Glossary pdf file was accessed 36,417 individual times by users while the Acronym PDF file was downloaded 12,822 times.
- CoRIS continues to update both resources as new terms are submitted by users. The Acronyms/Abbreviations List now has close to 5,300 terms while the Glossary contains over 6,390 coral ecosystem related terms which include definitions and photos when available.