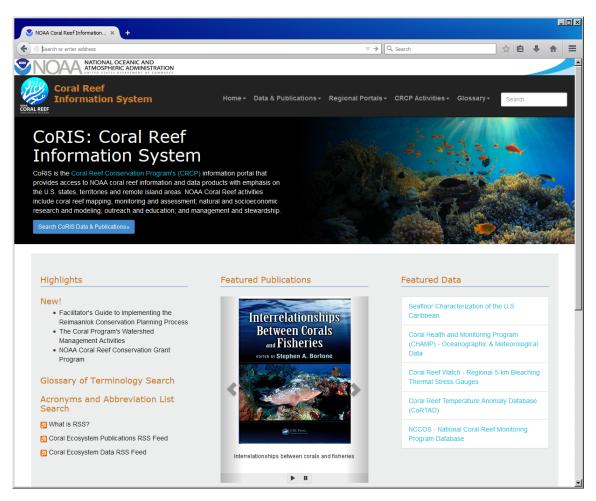


Fiscal Year 2014 Coral Reef Information System (CoRIS) Accomplishments

Highlights

Content and Technical Improvements -

CoRIS Goes Responsive – During FY14 CoRIS staff worked on a website redesign which was released in December, 2014. The new CoRIS website uses a responsive design approach, which means that the page automatically resizes to fit large desktop screens and a variety of tablet and smartphones. The new website also places popular Coral Program products and resources front and center for streamlined access from the homepage. With nearly 25% of the traffic to the CoRIS website coming from mobile devices we believe this redesign will support increased access to the data and information products generated through the Coral Program.



New Metadata and Data – Added 343 metadata records to CoRIS and made 4,241 record updates. At the conclusion of FY14 the CoRIS catalog had a total of 5,319 metadata records in the collection.

New Publications – Publication submissions were up significantly in 2014! CoRIS entered 757 publications into the CoRIS virtual library, bringing the total number of publications in CoRIS to 4,501.

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 – During Q4 CoRIS assisted with making routine updates to the CRCP website. CoRIS also 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 2008-2014 products that are overdue and due soon.

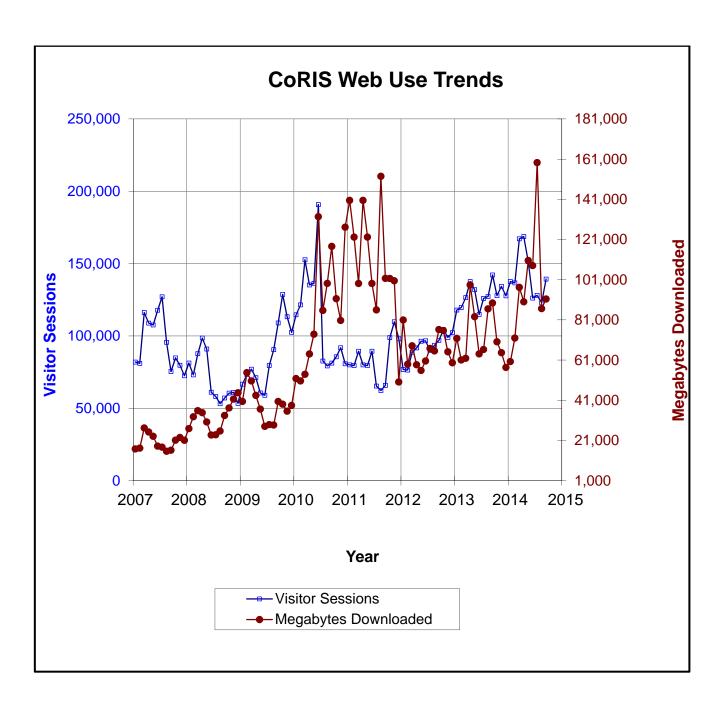
Collaborations – Served as a member of the CRCP Data Management Working Group, CRCP Project Proposal Database Team, Deep Sea Coral Coordination Call, and other CRCP coordination groups, NESDIS Information Resource Management Team Metadata Meeting, NODC Technical Development Team, NODC Web Team Meeting, 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, and the ESRI International Users Conference. Staff also participated in website development and ISO 19115 metadata training classes.

Team Updates – Michelle Kadziel-Uber joined the project team as the CoRIS Administrative Research Assistant

Performance Statistics

Element	October 2013	September 2014	% Change
Number of Metadata Files Number of Publication References	5,019	5,319	+5.98%
	3,744	4,494	+20.03%
Number of Glossary terms	6,401	6,407	+0.09%
Number of Acronyms and Abbreviations	5,296	5,648	+6.64%



Top Downloaded Documents

Publication Name	# of FY14 Downloads
Demographic baseline report of U.S. territories and counties adjacent to coral reef habitats: U.S. Virgin Islands	53,653
A reef manager's guide to coral bleaching	50,897
The state of coral reef ecosystems of the United States: 2007	49,865
NOAA's Coral Reef Information System: Glossary of terminology	48,993
Coral reef habitat assessment for U.S. marine protected areas: State of Hawaii: NW and Main Hawaiian Islands	43,447
Coral reef habitat assessment for U.S. marine protected areas: Commonwealth of Puerto Rico	40,063
Coral reef habitat assessment for U.S. marine protected areas: U.S. Virgin Islands	33,144
Regulated and protected species in U.S. Caribbean waters	32,666
Status of Caribbean coral reefs after bleaching and hurricanes in 2005	31,380
Culebra community watershed action plan for water quality and coral reefs	23,763

Table: This table represents the top ten accessed publications from the CoRIS server in FY14. A total of 725,768 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 FY14 Accesses
1995 Quantitative Survey of the Corals of American Samoa (NODC Accession 0001972)	2,290
National Status and Trends, Benthic Surveillance Project DNA-Xenobiotic Adducts Data, 1991, National Centers for Coastal Ocean Science	2,287
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)	2,178
Florida Reef Fish Visual Census 1985 Species Site Matrix (NODC Accession 0001394)	1,596
Long-Term Monitoring at the East and West Flower Garden Banks National Marine Sanctuary 2002-2006, (NODC Accession 0012632)	1,466
Benthic Habitats of Puerto Rico; Photomosaic of Guayanil	1,435
High Resolution Aerial Photography of Puerto Rico and the U.S. Virgin Islands, 1965-1999	1,434
Anthropogenic and Natural Stresses on Coral Reefs in Hawaii: A Multi-Decade Synthesis of Impact and Recovery (NODC Accession 0001063)	1,410
Bahia Las Minas, Panama Oil Spill Assessment 1986-1991, (NODC Accession 9400033)	1,406

Gridded bathymetry of Penguin Bank, Hawaii, USA	1,389
Landsat 7 ETM/1G satellite imagery - Hawaiian Islands cloud-free mosaics	1,387
Gridded multibeam bathymetry of Apra Harbor, Guam U.S. Territory	1,383
Marine Biological Survey, Peacock Point Outfall, Wake Atoll June 1998 (NODC Accession 0000247)	1,383
Rarotonga Radiocarbon (delta 14C) for 1950 to 1997	1,369
4 km NODC/RSMAS AVHRR Pathfinder Version 5 Seasonal and Annual Day- Night Sea Surface Temperature Climatologies for 1982-2009 for the Gulf of Mexico (NODC Accession 0072888)	1,354

Table: The above table represents the top fifteen metadata records accessed over the previous year. During FY14 a total of 4,993,532 records were accessed from the website.

Regional Portal Usage Summary

Regional Portal	FY12 - Q4	FY13 – Q1	FY13 - Q2	FY13 - Q3	FY13 - Q4	FY14 - Q1	FY14 – Q2	FY14 – Q3	FY14 – Q4	Total
American Samoa	718	928	813	559	664	844	871	890	804	7,091
CNMI	964	1,288	1,170	1,042	1,187	1,317	1,227	1,302	1,335	10,832
Florida	2,436	2,695	2,615	3,161	3,806	3,173	3,091	3,636	2,748	27,361
Flower Garden Banks	3,364	977	800	652	679	773	728	815	836	9,624
Guam	1,100	1,290	1,018	797	794	897	891	855	895	8,537
Hawaii	1,325	1,693	1,111	896	990	1,396	904	1,041	1,066	10,422
Homepage	8,424	1,626	830	874	957	1,226	1,143	1,162	829	17,071
Marshall Islands	1,472	1,719	1,160	1,025	1,133	918	900	961	1,007	10,295
Micronesia	693	911	790	585	546	635	600	741	711	6,212
Navassa	709	918	786	538	517	652	502	697	747	6,066
NWHI	732	914	734	530	583	752	624	667	723	6,259
Palau	664	931	793	562	599	771	649	704	697	6,370
PRIAs	769	955	879	636	692	842	761	1,061	1,140	7,735
Puerto Rico	1,697	1,525	1,261	1185	1,652	1,377	1,454	1,519	1,545	13,215
Virgin Islands	809	998	866	615	695	756	767	881	949	7,336
Total	25,876	19,368	15,626	13,657	15,494	16,329	15,112	16,932	16,032	154,426

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 2012.

Accomplishment Details

New Data and Metadata

Number of metadata records within CoRIS by Line Office

Office/Group	Records Added in FY14	Total Records in CoRIS
NESDIS	43	361
NMFS	29	3,358
NOS	262	1,382
OAR	9	207
Miscellaneous	0	11
Total	343	5,319

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

Source	Description	Count
NMFS	Mosaics of gridded multibeam bathymetry and bathymetry derived from multispectral World View-2 satellite imagery of Baker Island, Pacific Remote Island Areas, Central Pacific	2
NMFS	Calcification Rates of Crustose Coralline Algae derived from Calcification Accretion Units (CAUs) deployed in the Pacific Islands	1
NMFS	Mosaic of gridded multibeam bathymetry and bathymetry derived from multispectral World View-2 satellite imagery of Sarigan Island, Territory of Mariana, USA	2
NMFS	Coral Cores for selected locations in the Pacific Ocean obtained to determine calcification and extension rates of Porites spp. corals	1
NOS	2010 Northwestern Hawaiian Islands Lidar - Laysan Island, Pearl & Hermes Atoll, and Lisianki Island	3
NOS	Benthic habitat maps for West and East Bank-Flower Garden Banks National Marine Sanctuary	2
	CRED Fish Observations from Stereo Video Cameras on a SeaBED AUV collected around Tutuila, American Samoa in 2012	1
NOS	Biological and physical geospatial data from St. Croix East End Marine Park, U.S. Virgin Islands from 6 Feb 2001 to 18 May 2012 (NODC Accession 0118500)	1
NOS	C-CAP Land Cover, Commonwealth of the Northern Mariana Islands (CNMI), Rota (1946) and Saipan (1945)	2
NOS	Benthic Habitats of CNMI & Guam Derived From IKONOS Imagery, 2001-2003	3
NOS	Seafloor Characterization of the U.S. Caribbean – 2005 survey data for NPS Offshore (St. John), NPS Inshore (St. John), Buck Channel (St. Croix), Salt River (St. Croix), Grammanik Bank, and Mid Shelf Reef (MSR) project areas.	101
NOS	Summit to Sea Characterization of Coastal Watersheds- data files for USVI and Puerto Rico	23
NOS	Accuracy Assessment and Ground Truth data for the 1999 Benthic Habitats of Puerto Rico and the U.S. Virgin Islands	4

	Mapping Project	
NOS	Accuracy Assessment and Ground Truth data for the 2000 Benthic Habitats	9
1100	of the Main Hawaiian Islands Mapping Project	Ŭ
NOS	Accuracy Assessment and Ground Truth data for the 2003 Benthic Habitats	4
	of the U.S. Pacific Territories Mapping Project	-
NOS	Seafloor Characterization of the U.S. Caribbean – 2004 survey data for St.	15
	Thomas. St. John, and St. Croix	
NOS	Majuro Benthic Habitats	1
NESDIS	Coral Community Metabolism Data From the Palmyra Atoll, from 2012-08-	1
	01 to 2012-10-01 (NODC Accession 0121946)	
NOS	C-CAP Land Cover, American Samoa	9
NOS	C-CAP Land Cover Change Analysis 2003-2010, American Samoa	6
NOS	C-CAP Land Cover CNMI	14
NOS	C-CAP Land Cover Guam	1
NOS	Impervious Surfaces, Island of Hawaii	1
NOS	C-CAP Land Cover Main Hawaiian Islands	6
NOS	C-CAP Land Cover Change Analysis 2005-2011, Oahu	1
NOS	C-CAP Land Cover U.S. Virgin Islands	6
NOS	C-CAP Land Cover Change Analysis 2002-2007, U.S. Virgin Islands	3
NOS	C-CAP Land Cover Puerto Rico (2001)	1
NOS	C-CAP Land Cover Change Analysis 1996-2010, Florida	2
NOS	C-CAP Land Cover Florida (2010)	1
NOS	Maps of Shallow-water Banks in the Northwestern Hawaiian Islands	1
	Derived from Moderate Resolution Landsat Satellite Imagery	
NOS	Aggregated Habitat Cover Maps Depicting the Shallow-water Benthic	1
	Habitats of the Northwestern Hawaiian Islands Derived from High	
	Resolution IKONOS Satellite Imagery	
NOS	Impervious Surfaces, American Samoa	2
NOS	Impervious Surfaces, Guam	1
NOS	Impervious Surfaces, CNMI	1
NOS	Impervious Surfaces, U.S. Virgin Islands	3
NOS	Imagery CNMI and American Samoa	2
NMFS	Assessing and monitoring cryptic reef diversity of colonizing marine	1
	invertebrates across the U.Saffiliated islands and atolls in the Pacific since	
OAD	2008 using the Autonomous Reef Monitoring Structure (ARMS) method	4
OAR	Atlantic Ocean Acidification Test-Bed Net Ecosystem Calcification and	1
NMFS	Net Ecosystem Productivity, Cheeca Rocks, Florida Reef Tract FY2013 CRED Wave and Tide Recorder (WTR); Tutuila, American Samoa	2
NMFS	CRED Temperature and Conductivity Recorders (SBE37); Tutuila,	<u>∠</u> 1
INIVII	American Samoa	ı
	/ inchair danta	
	Total Additions:	243
	1 otal / taditionol	2.10

Table: Sample of the total metadata record additions (243) and modifications (4,241) that were made to the CoRIS metadata library in FY 2014.

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

Office	Name
AOML	Integrated Coral Observing Network (ICON) - Lao Lao Bay (LLBP7 - Saipan, Northern Mariana Islands) 2012 Meteorological and Oceanographic Observations from 19 Mar to 19 Jul 2012 (NODC Accession 0117721)
AOML	Integrated Coral Observing Network (ICON) - Salt River Bay (SRVI2 - St. Croix, USVI) Meteorological and Oceanographic Observations from 01 Jan to 31 Dec 2012 (NODC Accession 0117726)
AOML	Integrated Coral Observing Network (ICON) - Port Everglades (PVGF1 - Port Everglades, Florida) Meteorological and Oceanographic Observations from 01 Jan to 31 Dec 2012 (NODC Accession 0117727)
AOML	Integrated Coral Observing Network (ICON) - Molasses Reef (secondary) (MLRF2 - Florida Keys National Marine Sanctuary, Florida) Meteorological and Oceanographic Observations from 01 Jan to 31 Dec 2012 (NODC Accession 0117728)
AOML	Integrated Coral Observing Network (ICON) - Media Luna Reef (LPPR1 - La Parquera Natural Reserve, Puerto Rico) Meteorological and Oceanographic Observations from 01 Jan to 31 Dec 2012 (NODC Accession 0117729)
AOML	Integrated Coral Observing Network (ICON) - Little Cayman (LCIY2 - Little Cayman, Cayman Islands) 2012 Meteorological and Oceanographic Observations from 01 Jan to 26 Oct 2012 (NODC Accession 0117730)
NCCOS	Biological and physical geospatial data from St. Croix East End Marine Park, U.S. Virgin Islands from 6 Feb 2001 to 18 May 2012 (NODC Accession 0118500)

New Publications in FY14

Source	Count
NESDIS	57
NMFS	226
NOS	152
OAR	41
NOAA	93
Miscellaneous	108
Total	677

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 2014.

In FY 2014, CoRIS staff successfully added a total of 677 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. In
 addition, based on requests that were received from the external community during the
 OA metadata template review process CoRIS staff compiled a crosswalk mapping
 each field in the OA template to the corresponding place in the ISO 19115 standard.
- CoRIS staff and the Ocean Acidification Data Management team collaborated on a
 journal article entitled "A metadata template for ocean acidification data" which was
 accepted for publication by the Earth System Science Data journal. This work was also
 presented as part of a poster session as the Fall AGU meeting.
- CoRIS provided a briefing on the CoRIS project to the U.S. Coral Reef Task Force All Islands Committee.

Coral Reef Conservation Program Support

- CoRIS began providing technical support to CRCP Headquarters and is now supporting all routine updates and associated tasks for the CRCP website.
- CoRIS participated in the requirements gathering process for the next version of the CRCP Coral Project Database.
- 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 2008-2014 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.
- CoRIS began work with CRCP staff to scope out the requirements and develop a
 prototype project search tool which would allow users to search for CRCP Projects by
 region and locate the work that was generated as part of that project. As part of this
 effort a catalog retagging effort was undertaken to insert project funding information
 into the metadata and library catalog entries. Development of a public version of this
 tool is still in the preliminary stages.

Collaborations

CoRIS participates in monthly coordination calls with the PIFSC Coral Reef Ecosystem
Division to discuss ongoing action items and outstanding CRCP products. CoRIS staff
assisted in making updates to the entire CRED metadata collection of over 3,500
record to reflect the relocation to the NOAA IRC facility earlier this year.

- 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 staff worked with the NMFS InPort team to test and provide feedback on the
 metadata ingest and export capabilities out of the NMFS metadata management
 system. When exported from the system, a well-populated InPort record will now
 satisfy CRCP requirements without further edits. This is a major step forward in the
 goal to minimize the impacts of duplicative metadata requirements on NMFS CRCP
 funded Pls.
- 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. This year we began efforts to consolidate the two NCCOS collections, so there will eventually be one authoritative version of the record which will be pushed to all appropriate catalogs. Over time, this should reduce the metadata maintenance requirements on the NCCOS data providers by removing the need to maintain and update multiple copies of the same metadata document when changes are warranted.
- Office of Coastal Management staff worked with CoRIS to set up the automatic harvesting of LiDAR metadata from the National Ocean Service metadata collection into CoRIS, removing the need for manual metadata submissions.

Web Site Content and Technical Improvements

Data & Metadata

- In the first part of FY14, the CoRIS Map Search was upgraded to a newer version of Google Maps software due to changes in the IT security requirements. The map code was also updated to support the full searchability of the ISO 19115-2 metadata format as some offices have begun to support metadata in the new format. In the last part of FY14 the CoRIS Map Search was retired due to changes in NOAA's license agreement with Google which made the application no longer affordable to continue operating.
- The metadata publication process within CoRIS has been updated to support ISO 19115-2 metadata records.
- The CRCP metadata collection was registered within the NOAA Enterprise Metadata
 Management Architecture (EMMA) to fulfill a NOAA Environmental Data Management
 Committee requirement. EMMA provides diagnostic reports and visualization of the
 metadata metrics over time to explore aspects of metadata quality and completeness.
 http://www.ngdc.noaa.gov/docucomp/page?view=wafsInGroup&title=Metrics%20and%20Collections%20for%20Group%20NOAA/CORIS/&groupName=NOAA/CORIS/

 The CRCP metadata collection was also registered with the NOAA data catalog (https://data.noaa.gov/dataset). The registration process was a multi month endeavor to complete but inclusion in the NOAA catalog ensures that CRCP is meeting a subset of requirements specified under the Open Data Policy.

Regional Portal

The CoRIS regional data portals provide users with region-specific data and information products in a clear, concise, and integrated way. After discussions with the USCRTF All Islands Committee we added a "Highlights Section" to the regional portals to allow the Jurisdictional Points of Contacts to feature work being done in the area. The first publication highlighted was from the Republic of the Marshall Islands and is entitled "Facilitator's Guide to Implementing the Reimaanlok Conservation Planning Process".



Coral Publications

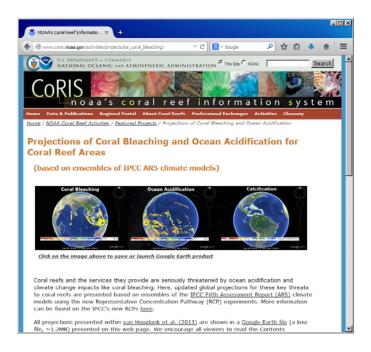
• CoRIS staff updated our cataloging system to include additional publication categories and fields. We also updated the requirements on several categories to better capture how publications are cited in today's world of digital publications.

The following publications were featured on the CoRIS website in FY14:

- Stormwater management in Pacific and Caribbean Islands: A practitioner's guide to implementing LID. This document was accessed 19,748 times during the fiscal year. http://www.coris.noaa.gov/activities/stormwater_lid/
- Deep Sea Research and Technology Program 2014 Report to Congress http://www.coris.noaa.gov/activities/reportcongress_dscrtp_2014/
- Coral Reef Conservation Program Ocean Acidification Science Plan Fiscal Years 2012-2016. This document was accessed 4,391 times during the fiscal year. http://www.coris.noaa.gov/activities/crcp_techmemo_18/
- An assessment of chemical contaminants, toxicity and benthic infauna in sediments from the St. Thomas East End Reserves (STEER). This document was accessed 3,003 times during the fiscal year. http://www.coris.noaa.gov/activities/steer chemtox/
- An assessment of chemical contaminants detected in passive water samplers deployed in the St. Thomas East End Reserves (STEER). This document was

Featured Coral Projects

CoRIS featured pages continue to serve as a mechanism to allow us to promote and highlight the work being done by NOAA's Coal Program (CRCP) and its partners. While product submission is a requirement of CRCP funding, please talk with us to determine if there are ways to highlight your projects accomplishments beyond the adding of items to the CoRIS product catalog. This year we featured four projects:



- American Samoa Coastal Uses Mapping Project
 http://www.coris.noaa.gov/activities/projects/asamoa_coastal_map/welcome.html
- Projections of Coral Bleaching and Ocean Acidification for Coral Reef Areas (based on ensembles of IPCC AR5 climate models)
 http://www.coris.noaa.gov/activities/projects/oa_coral_bleaching/welcome.html
- The Coral Program's Watershed Management Activities
 http://www.coris.noaa.gov/activities/projects/watershed/welcome.html
 - The Watershed Management Activities page highlights work done in the 19 priority watersheds and provides access to the watershed management plans and the corresponding implemented recommendations by jurisdiction
 - Two project pages were added to capture the source materials used to generate watershed management plans in the U.S. Virgin Islands



- St. Croix East End Watersheds -http://www.coris.noaa.gov/activities/projects/watershed/stx_reports_watershed.html
- St. Thomas East End Reserves Watershed -http://www.coris.noaa.gov/activities/projects/watershed/stthomas_reports_watershed.html
- CoRIS also developed a canned search to identify watershed related resources in the CoRIS catalog http://www.coris.noaa.gov/geoportal/rest/find/document?searchText
 =watershed&start=1&max=25&f=searchPage
- NOAA Coral Reef Conservation Grant Program Products
 - Two webpages were created to highlight some of the products produced through the Coral Program's various financial assistance awards.
 - U.S. Jurisdictional Grant
 Products –
 http://www.coris.noaa.gov/activities/projects/grants/
 - International Grant Products
 http://www.coris.noaa.gov/activities/projects/grants/international.html



 A canned publication grant search for publications was added to the browse tree on the CoRIS Geoportal (http://www.coris.noaa.gov/geoportal/catalog/search/browse/browse.page).
 Users have the option to view all documents in the CRCP Grant Program subcollection or search for a specific document within the subcollection using the filter feature.

Glossary/Acronym & Abbreviation List

- The CoRIS Glossary& Acronyms list continues to be one of the more popular portions
 of the website. In FY14 this section of the website received 101,274 visits with over
 236,920 individual page views.
- Updated pdf versions of the CoRIS Glossary& Acronym list were made available for download. During FY14 the Glossary pdf file was accessed 48,993 individual times by users while the Acronym PDF file was downloaded 7,895 times.
- CoRIS continues to update both resources as new terms are submitted by users. The Acronyms/Abbreviations List now has over 5,640 terms while the Glossary contains over 6,400 coral ecosystem related terms which include definitions and photos when available.