

MBON DATA PORTAL (v2.0)

Marine Biodiversity Observation Network BETA

The Marine Biodiversity Observation Network (MBON) is composed of regional networks of scientists, resource managers, and end-users working to integrate data from existing long-term programs to improve our understanding of changes and connections between marine biodiversity and ecosystem functions.

The MBON Data Portal is a data exploration tool with a customized public web interface that allows scientists, managers, and the general public to discover and access public data from many sources. The Portal provides real-time, delayed-mode, and historical data for in situ and remotely-sensed physical, chemical, and biological observations in both a Catalog and Map View. These data are focused on organisms from microbes to whales, including measures of biodiversity (presence and abundance), productivity, genomics, phenology, and other relevant ecological process measurements or indices. Also featured are habitat characterization and habitat diversity measures, including satellite data and added-value data derived from satellite observations (such as biogeographical seascape classifications), and neural network model results. Featured in this portal are biodiversity indices that have been computed for key biological datasets within the MBON regions.

The data have been collected by MBON federal agency and regional partners, including academic institutions, IOOS Regional Associations, NOAA Fisheries Science Centers, National Marine Sanctuaries, NOAA Ocean and Atmospheric Research (OAR) laboratories, California Current Integrated Ecosystem Assessment, State resource management agencies, and marine wildlife institutions.

MBON is funded under the National Ocean Partnership Program (NOPP RFP NOAA-NOS-IOOS-2014-2003803) in partnership between NOAA (US IOOS, OAR/Ocean Exploration and Research, and NOAA Fisheries), BOEM, and NASA, with the US IOOS pioneering the implementation.

Explore map

Release notes

For best results, use the latest version of these browsers.



Featured data views

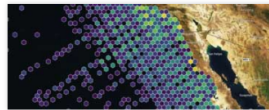
Alaska



BASIS fish catch

- ★ Data view: Pacific Warming
- ★ Data view: Sea ice
- 📍 Map view

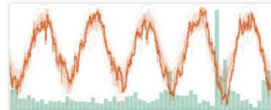
California



CALCOFI

- ★ Data view
- 📍 Map view

Florida

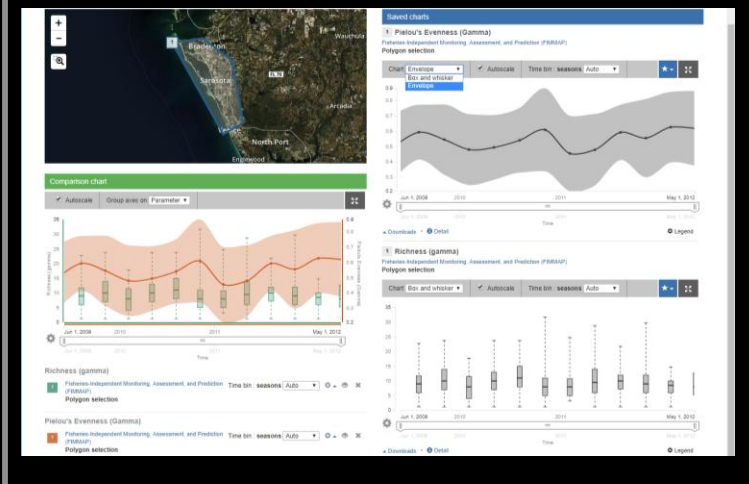
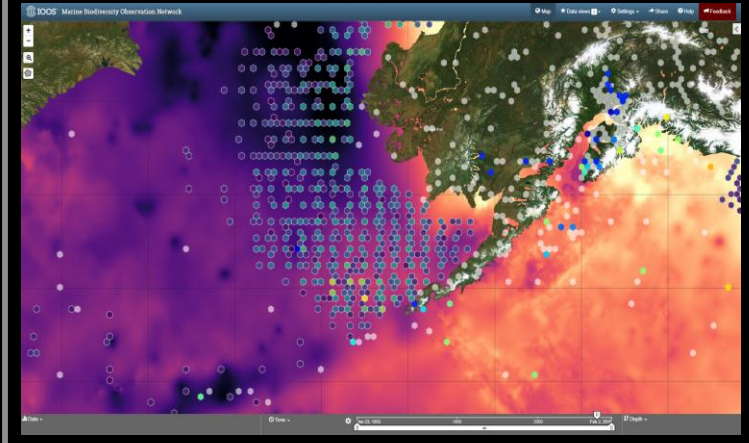


Manatee mortality and Sea Surface temperature

- ★ Data view
- 📍 Map view

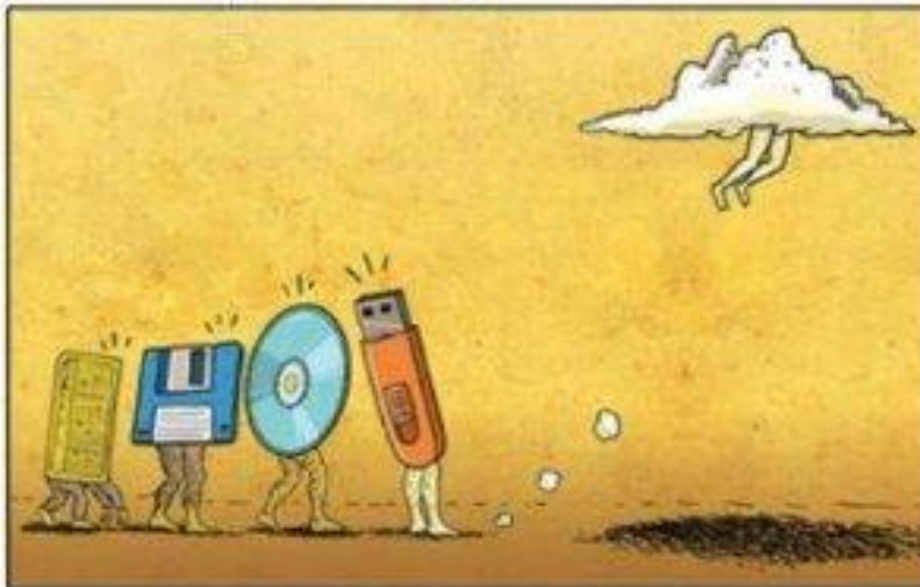
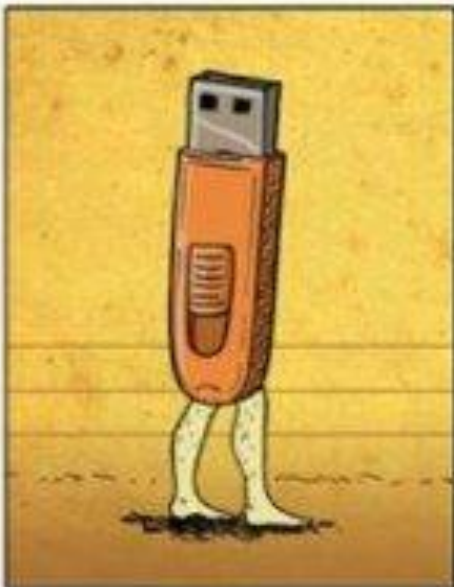
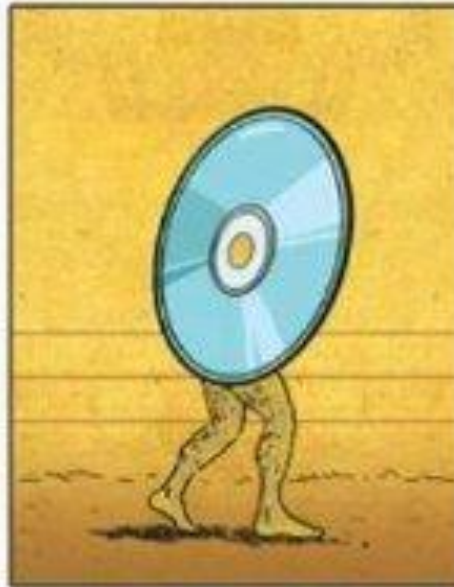


PARTNERS



Stacey Buckelew, Axiom Data Science

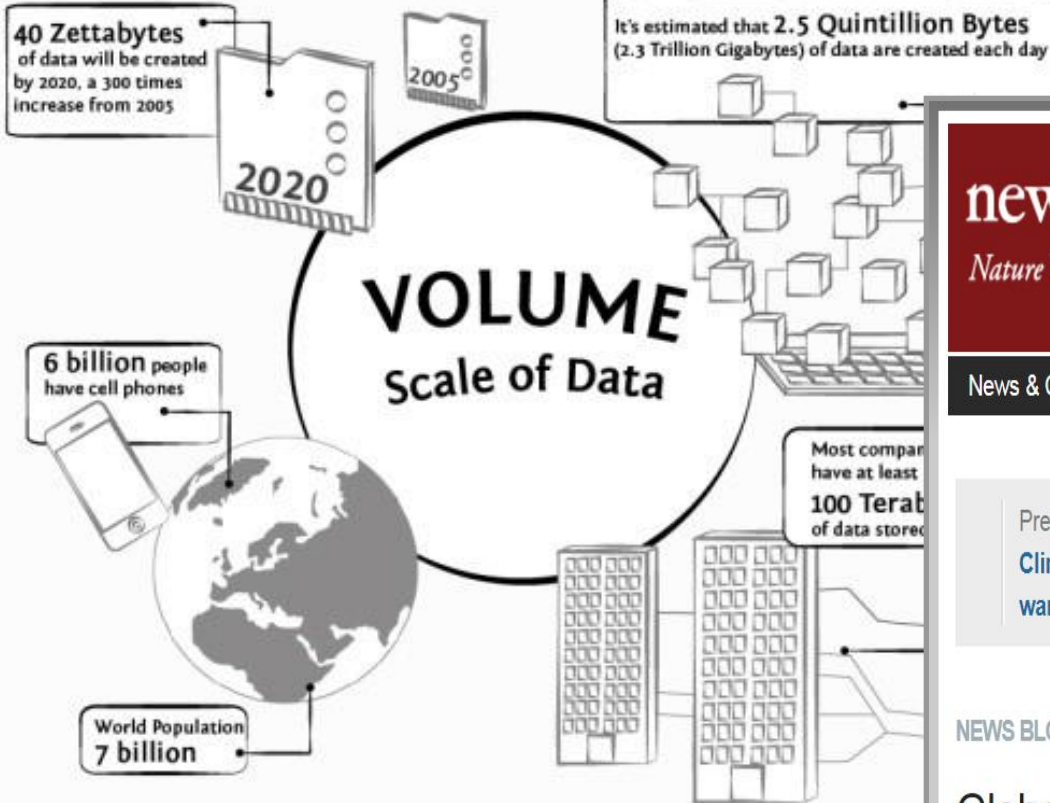




gusmorais.com

Really "Big Data" – Data volume is increasing exponentially

By the year 2020, the digital universe will reach 44 zettabytes – that's a 10-fold increase from 2013.



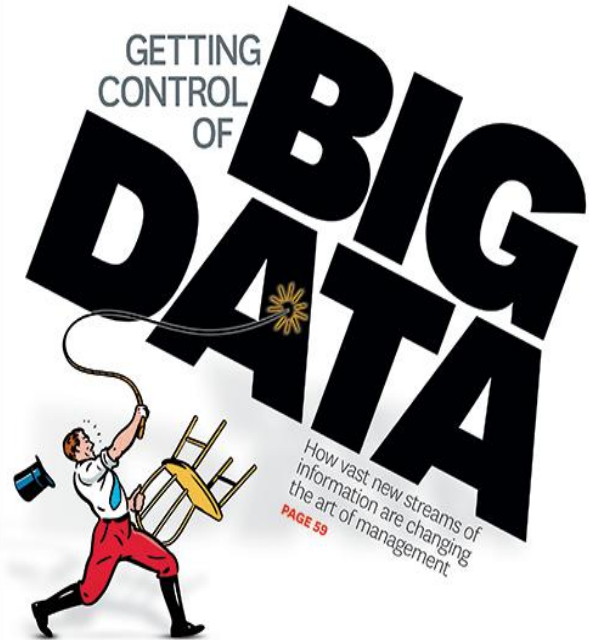
Harvard Business Review

OCTOBER 2012

46 **The Big Idea**
The True Measures Of Success
Michael J. Mauboussin

84 **International Business**
10 Rules for Managing Global Innovation
Keeley Wilson and Yves L. Doz

93 **Leadership**
What Ever Happened To Accountability?
Thomas E. Ricks



newsblog
Nature brings you breaking news

News & Comment > News

Previous post
[Climate change is pressing](#)
warns

NEWS BLOG

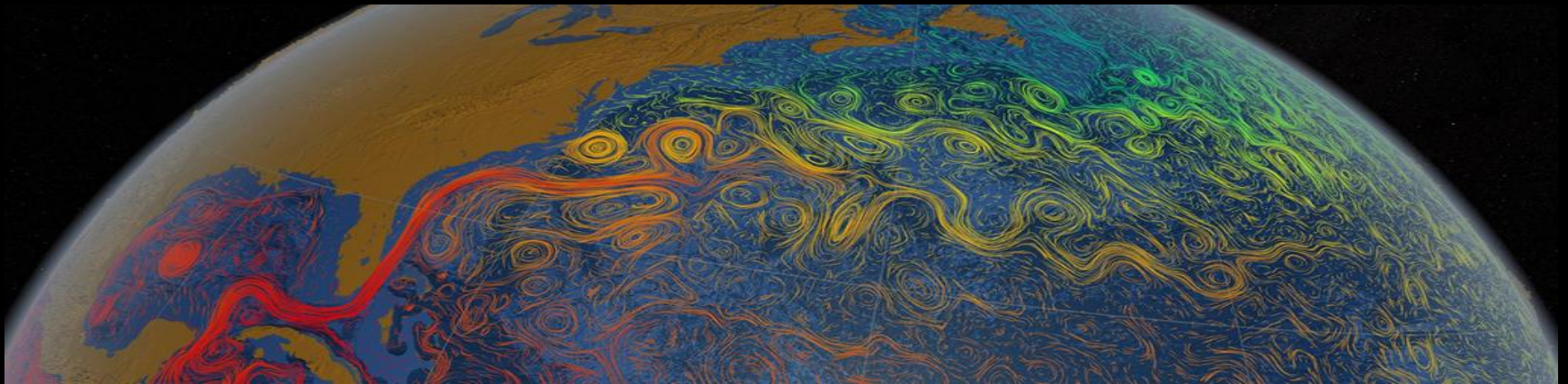
Global scientific output doubles every nine years

07.May.2014. | 16:46.BST. | Posted by Richard Van Noorden | Category: Policy, Publishing

It's a common complaint among academics: today's researchers are publishing too much, too fast. But how fast is the mass of scientific output actually growing?

DATA MANAGEMENT CHANGES

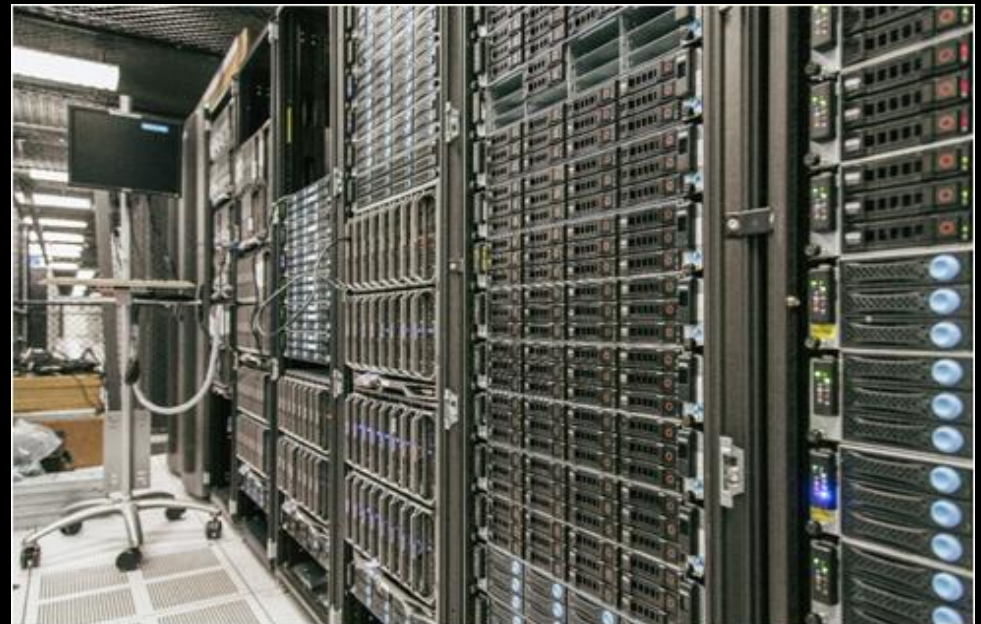
- Data explosion is reforming data management and governance
- Leveraging existing data systems in different ways- *architecture, storage, databases*
- Emphasis on open data as crucial to reliable science
- Integration, visualization, and dissemination are tools, not by-products

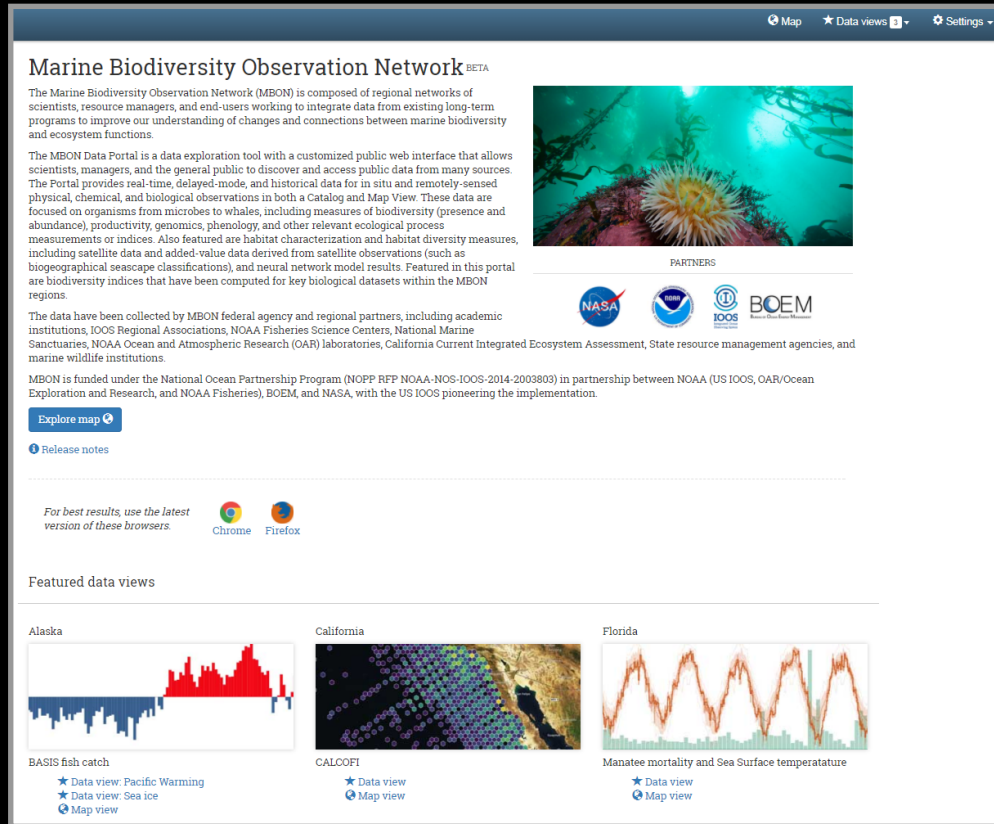


OCEAN DATA IS BIG DATA



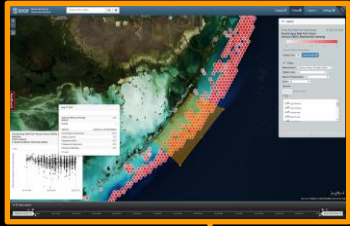
- Shared cyberinfrastructure approach
 - Leverage applications, systems & hardware across partners
- Community developed software, standards and protocols
 - Standardize systems and interfaces across partners
- Scalable compute and storage infrastructure (HPC)
 - 5 petabytes storage; 3,000 processing cores





The screenshot shows the MBON Data Portal interface. At the top, there are navigation options: 'Map', 'Data views', and 'Settings'. The main heading is 'Marine Biodiversity Observation Network BETA'. Below this, there is a descriptive paragraph about the MBON network and its data sources. To the right of the text is an underwater photograph of a sea anemone. Below the text, there is a 'PARTNERS' section with logos for NASA, NOAA, IOOS, and BOEM. Further down, there is a paragraph about the funding and implementation of the MBON program. A blue button labeled 'Explore map' is visible. Below that, there is a section for 'Release notes'. At the bottom of the screenshot, there is a section for 'Featured data views' with three sub-sections: 'Alaska' showing a bar chart for 'BASIS fish catch', 'California' showing a map for 'CALCOFI', and 'Florida' showing a line graph for 'Manatee mortality and Sea Surface temperature'. Each sub-section has links for 'Data view', 'Map view', and 'Sea ice'.

Customizable data environment allowing scientists, managers, and the public others to discover, interact, and access biologically-relevant data from different sources



**REUSE &
TRANSFORMATION**
*Jupyter Notebook & data
analyses*

Shannon Wiener Diversity
also quantifies the evenness associated with species richness

$$H' = -\sum_{i=1}^S p_i \ln p_i$$


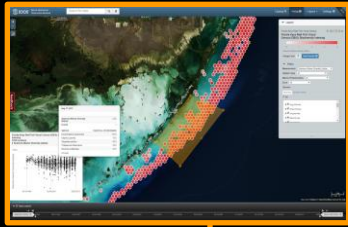
Pielou's Evenness
quantifies evenness by dividing the observed species richness by the maximum possible species richness

$$P = \frac{S}{S_{max}}$$

Evenness = species richness / species evenness

Evenness = species richness / species evenness

Evenness = species richness / species evenness

REUSE & TRANSFORMATION
Jupyter Notebook & data analyses

DATA ACCESS & DISCOVERY
Data portals & search catalogs

A screenshot of the NOAA data portal search results page. The page displays search results for "SECOORA Fisheries and Wildlife Monitoring" and "California Cooperative Oceanic Fisheries Investigations (COCFI)". The results include titles, descriptions, and thumbnail images. The page layout includes a search bar at the top, a sidebar with navigation options, and a main content area with search results.

Shannon Wiener Diversity
also quantifies the evenness associated with species richness

$$H' = -\sum_{i=1}^S p_i \ln p_i$$

Pielou's Evenness
quantifies evenness by how close to even each species is within a sampling event

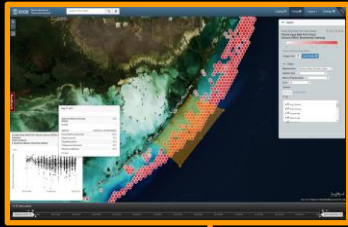
$$P = \frac{H'}{\ln S}$$

A given abundance list of species-level diversity (species richness, S , and evenness, P) can be compared to a theoretical maximum $H'_{max} = \ln S$ and $P_{max} = 1$ (all species are equally abundant).

Evenness = proportion of species(1) / (total(1) / S)

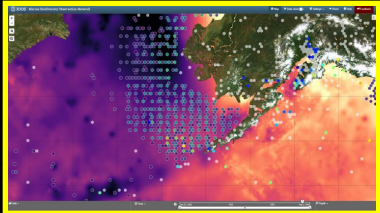
Evenness = $\frac{H'}{\ln S}$

Evenness = $\frac{H'}{\ln S}$

REUSE & TRANSFORMATION
Jupyter Notebook & data analyses

DATA ACCESS & DISCOVERY
Data portals & search catalogs

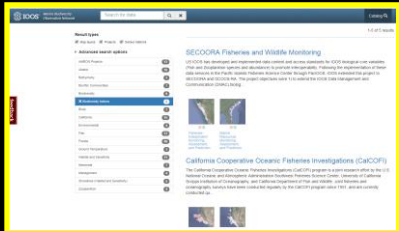


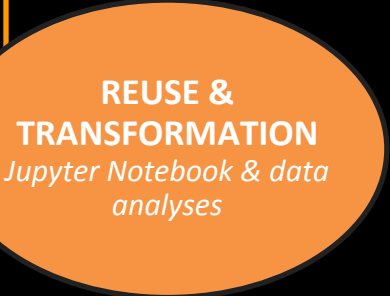
SECORA Fisheries and Wildlife Monitoring

SECORA has developed the most comprehensive data portal and access platform for COFV integrated core systems. This web interface allows the user to search for data, view data, and download data. The user can also view the data in a map view and download the data in a CSV format.

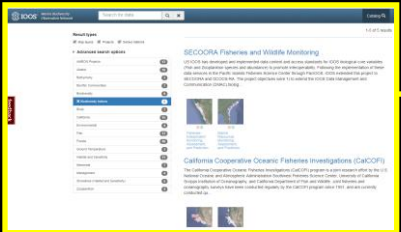
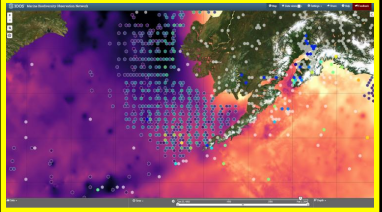
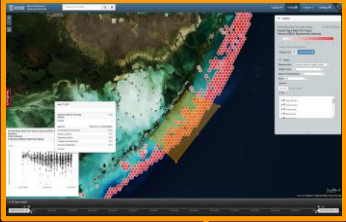
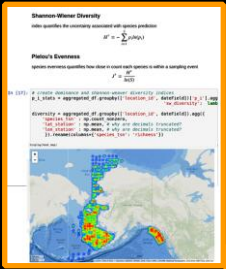
California Cooperative Oceanic Fisheries Investigations (CCOPI)

The California Cooperative Oceanic Fisheries Investigations (CCOPI) program is a joint venture effort by the US National Oceanic and Atmospheric Administration (NOAA), the University of California, and the California Department of Fish and Game. The program has been instrumental in the development of the CCOPI program since 1961, and has conducted numerous research projects.

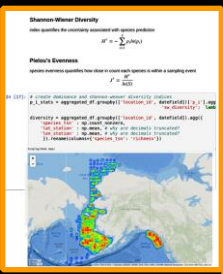
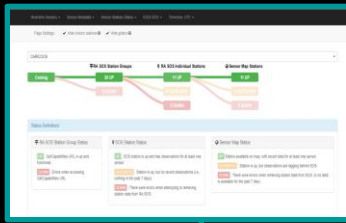
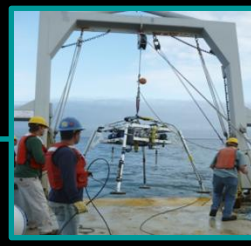




Data Lifecycle



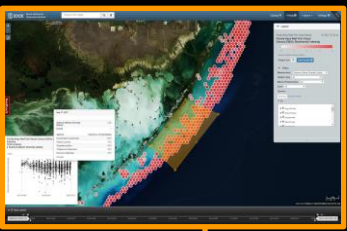
DATA CREATION & QUALITY CONTROL
Scientists or Ingestion



DATA STORAGE
Workspace

Name	Size	Status
2012_LowLatitude_Dataset_C00	20.0	Unlocked
2012_LowLatitude_Dataset_C01	20.0	Unlocked
2012_LowLatitude_Dataset_C02	20.0	Unlocked
2012_LowLatitude_Dataset_C03	20.0	Unlocked
2012_LowLatitude_Dataset_C04	20.0	Unlocked
2012_LowLatitude_Dataset_C05	20.0	Unlocked
2012_LowLatitude_Dataset_C06	20.0	Unlocked
2012_LowLatitude_Dataset_C07	20.0	Unlocked
2012_LowLatitude_Dataset_C08	20.0	Unlocked
2012_LowLatitude_Dataset_C09	20.0	Unlocked
2012_LowLatitude_Dataset_C10	20.0	Unlocked
2012_LowLatitude_Dataset_C11	20.0	Unlocked
2012_LowLatitude_Dataset_C12	20.0	Unlocked
2012_LowLatitude_Dataset_C13	20.0	Unlocked
2012_LowLatitude_Dataset_C14	20.0	Unlocked
2012_LowLatitude_Dataset_C15	20.0	Unlocked
2012_LowLatitude_Dataset_C16	20.0	Unlocked
2012_LowLatitude_Dataset_C17	20.0	Unlocked
2012_LowLatitude_Dataset_C18	20.0	Unlocked
2012_LowLatitude_Dataset_C19	20.0	Unlocked
2012_LowLatitude_Dataset_C20	20.0	Unlocked

REUSE & TRANSFORMATION
Jupyter Notebook & data analyses

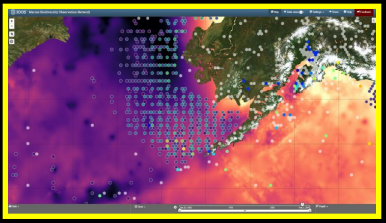


Data Lifecycle



DATA DESCRIPTION
Metadata Editor

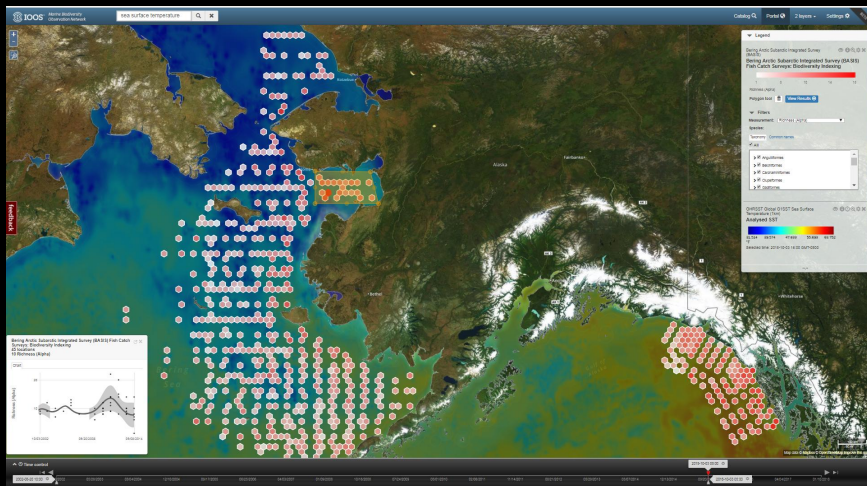
DATA ACCESS & DISCOVERY
Data portals & search catalogs



ARCHIVE & PRESERVATION
Repository submission pathway

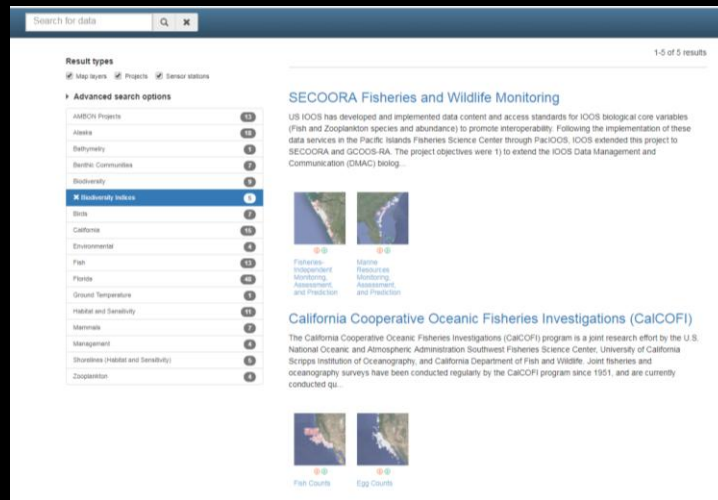
Map

Integrate & visualize data from many sources



Catalog

Search, metadata, & data download

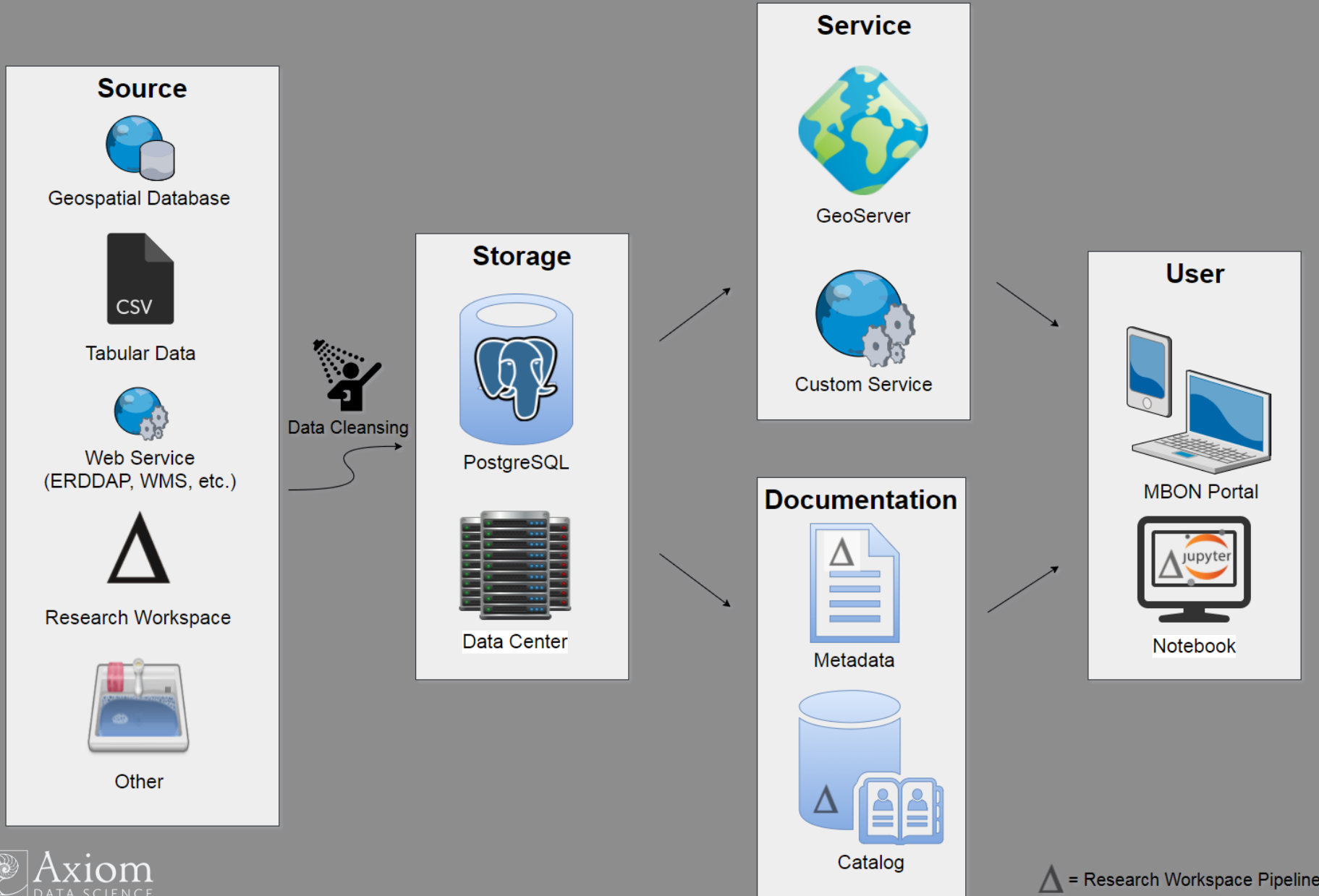


Data Views

Rapidly assimilate & compare different data streams



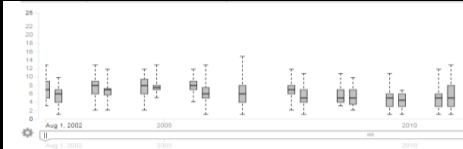
MBON Data Pipeline



Data Types

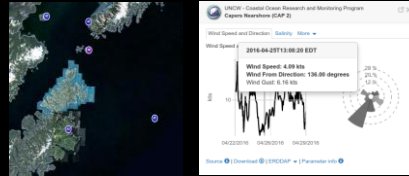
Biodiversity

count, richness, diversity indices



Platforms

moorings, shore stations



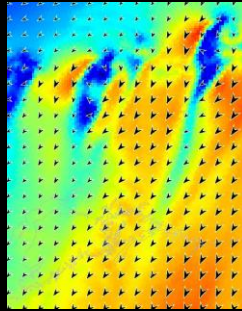
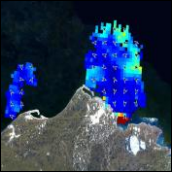
Products

skill assessment, shoreline change, etc.



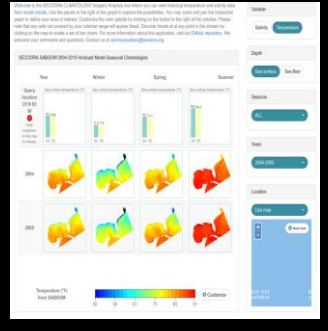
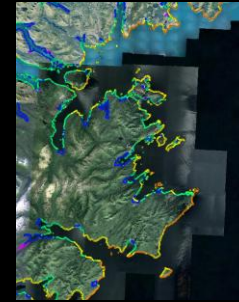
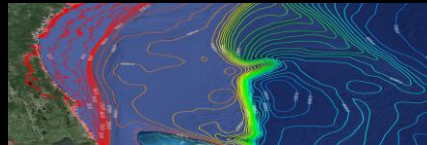
Grids

models, satellite, radar



GIS

Habitat types, bathymetry, fishing zones, etc.



RESEARCH WORKSPACE

AMBN - Chlorophyll-A and Nutrient from CTD

Date: 7 Year data, 2016

AMBN 2015 bottle file view: Station locations and depths.csv (0.7 kB)

AMBN 2015 bottle file view: Nutrients_AMBNorgnalbottle file.csv (40.0 kB)

AMBNCH15_ML_3_Affiliations.png (437.0 kB)

AMBNCH15_ML_4_Affiliations.png (512.0 kB)

AMBNCH15_ML_5_Affiliations.png (482.0 kB)

AMBNCH15_ML_3_Affiliations.png (511.4 kB)

AMBNCH15_SDC1_Affiliations.png (439.5 kB)

AMBNCH15_C1_Affiliations.png (533.0 kB)

bottom water AMBNCH15_Phosphate.png (270.1 kB)

bottom water AMBNCH15_MineralNitrite.png (270.1 kB)

AMBNCH15_ML_3_Affiliations.png (452.4 kB)

AMBNCH15_SDC1_Affiliations.png (452.4 kB)

bottom water AMBNCH15_Ammonium.png (269.3 kB)

bottom water AMBNCH15_Silicate.png (257.5 kB)

Integrated C15_4.png (266.1 kB)

AMBN - Chlorophyll-A and Nutrient from CTD

AMBN 2015 bottle file view: Station locations and depths.csv (0.7 kB)

Abstract

This dataset contains a comprehensive suite of water sampling measurements of water samples collected for hydrographic analysis using the AMBN program. Data include 16 station locations, station names, date, time, latitude, longitude, depth, and time from the bottle was closed. Temperature, salinity, CTD, and depth data were collected. Data for the depth the bottle was closed, depth below atmospheric level, depth anomaly and temperature were all collected using water data collected from the CTD. Each CTD measurement of AMBNCH15 parameters was the mean of the 20 CTD sampling runs, all occurring in the right of the bottle. Parameters used are the chemistry measurements made on samples collected from each bottle sample. Chlorophyll a concentrations (chl_a) and nutrient concentrations (phosphate, nitrite, nitrate, ammonia, silicate, nitrate, nitrite, and silicate). Water samples were also collected for analysis of AMBNCH15-bio. Data will be provided at a later date following laboratory analysis.

Purpose

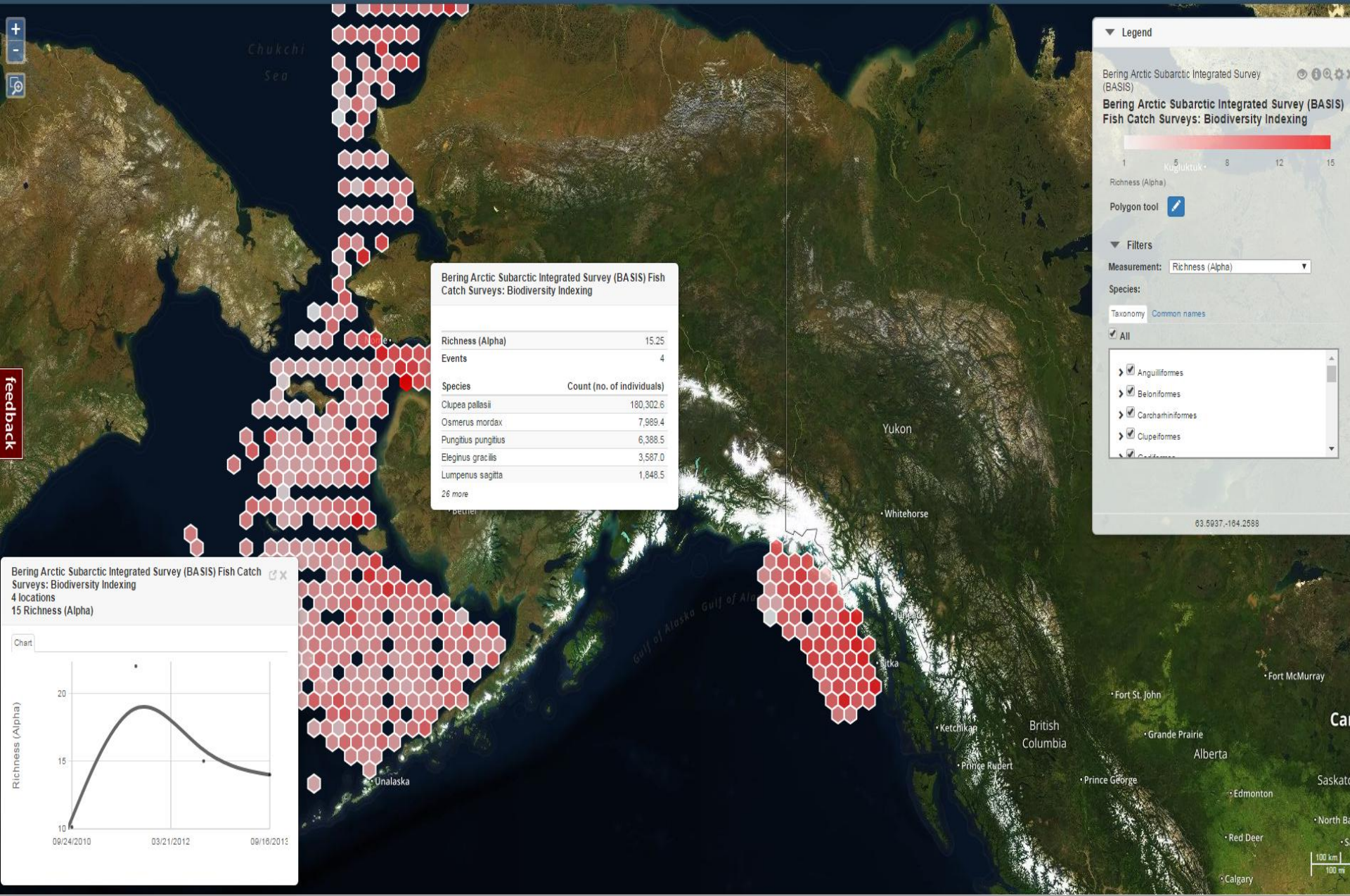
The goal of the Arctic Marine Ecosystems Observatory (AMBN) project is to demonstrate and build an operational marine hydrographic observing network from moorings to vessels, employing directly leads from general to operational AMBNCH15 field region to located on the Chukchi Sea continental shelf of the US Arctic as a region exposed to climate change and anthropogenic influences.

AMBNCH15 aims to develop a sustainable model of continuous hydrographic observation including all levels of diversity from general to operational to research. This project aims to characterize the hydrographic conditions of water entering the Chukchi Sea from the Pacific through Bering Strait by measuring temperature, salinity, and nutrient content using a Seabird 6000 CTD.

Supplemental information

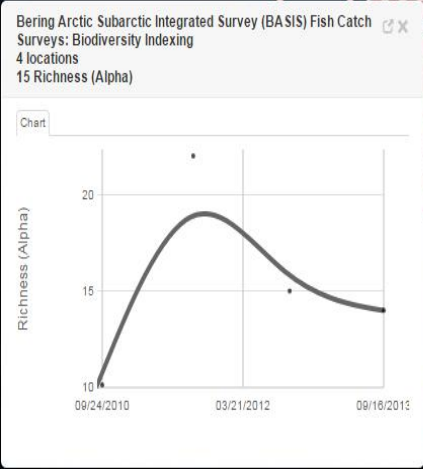
© 2016 NOAA. Sponsor: National Oceanic and Atmospheric Administration. Bureau of Ocean Energy Management and Third-Party. Product: General. Asset number: 141 ENCH15 (2016). National Ocean Partnership Program/University of Alaska Partners, with funds subcontracted for efforts at the University of Maryland Center for Environmental Science.

Data and metadata available in the AMBN Data Portal may not represent the most up-to-date version of the measure. Product authors of the AMBN datasets are being notified for long-term preservation in the DataONE network. Other metadata, the most current version of the dataset and its metadata record will be available through DataONE, and the record will be updated with a link to the metadata. Check the DataONE portal and DataONE metadata record as appropriate. Please contact the originator for additional information prior to significant use or publication.



Bering Arctic Subarctic Integrated Survey (BASIS) Fish Catch Surveys: Biodiversity Indexing

Richness (Alpha)	15.25
Events	4
Species	Count (no. of individuals)
<i>Clupea pallasii</i>	180,302.6
<i>Osmerus mordax</i>	7,989.4
<i>Pungitius pungitius</i>	6,388.5
<i>Eleginus gracilis</i>	3,587.0
<i>Lumpenus sagitta</i>	1,848.5
26 more	



Legend

Bering Arctic Subarctic Integrated Survey (BASIS)
Bering Arctic Subarctic Integrated Survey (BASIS)
Fish Catch Surveys: Biodiversity Indexing

Richness (Alpha)

Polygon tool

Filters

Measurement: Richness (Alpha)

Species:

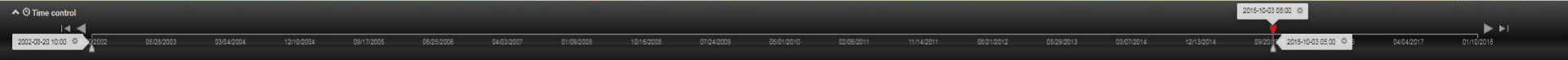
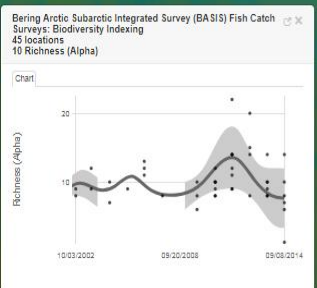
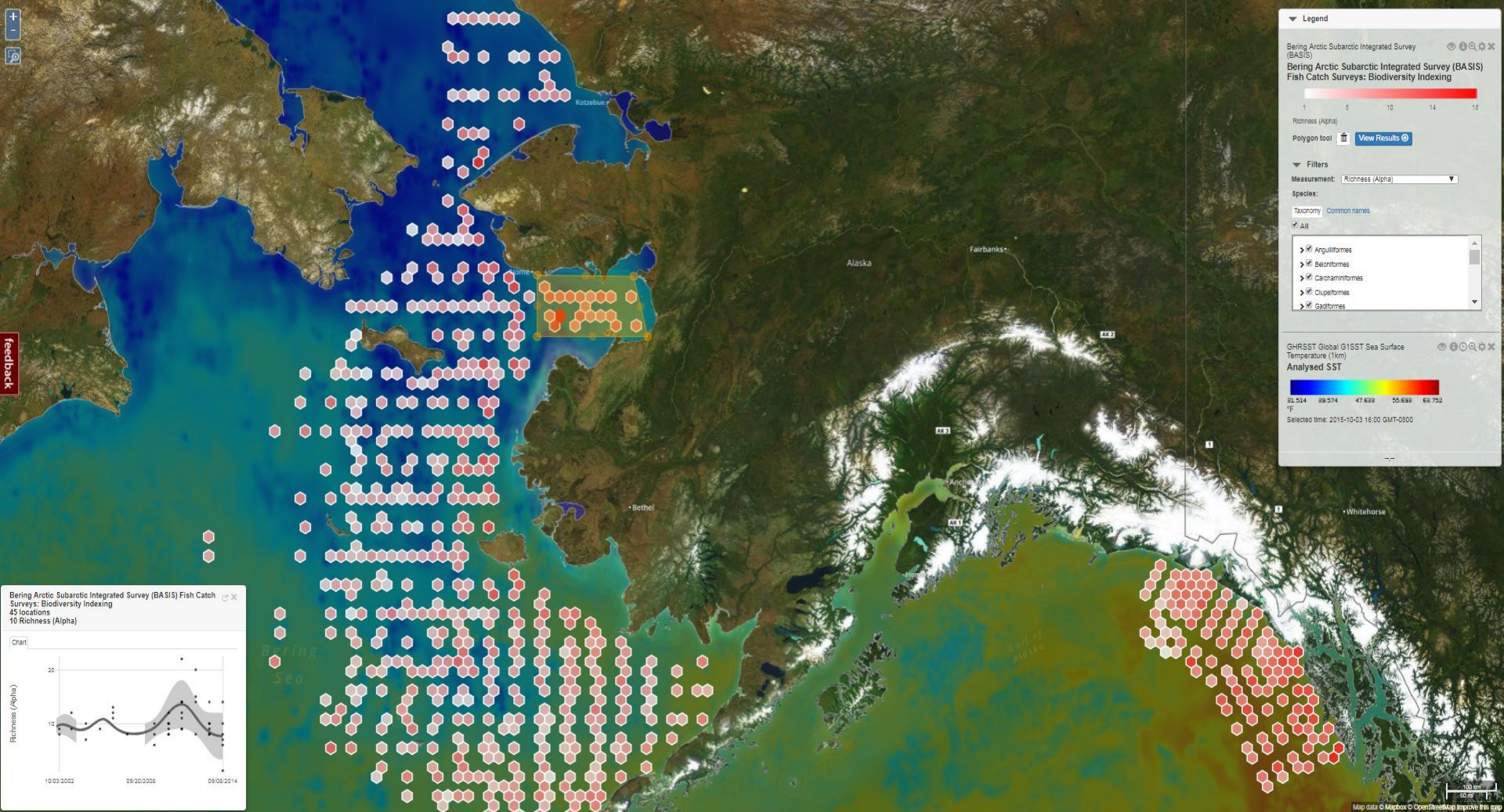
Taxonomy Common names

All

- Anguilliformes
- Belontiiformes
- Carchariniiformes
- Clupeiformes
- Cypriniformes

63.5937,-164.2588

feedback



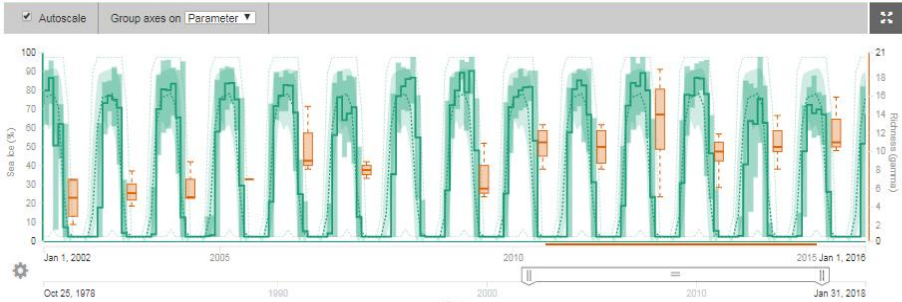
Custom Data Views ('dashboards')

★ BASIS (Bering Arctic Subarctic Integrated Survey): Fish Species Richness and NSIDC Sea Ice Concentration, Bering Sea (2002 - 2015)

Load and launch map layers for this data view



Comparison chart



Sea Ice (%)

NSIDC Sea Ice Concentration
63.8504,-166.1462

Time bin : months Auto

Richness (gamma)

Bering Arctic Subarctic Integrated Survey (BASIS) Fish Catch Surveys: Biodiversity Indexing
Polygon selection

Time bin : years Auto

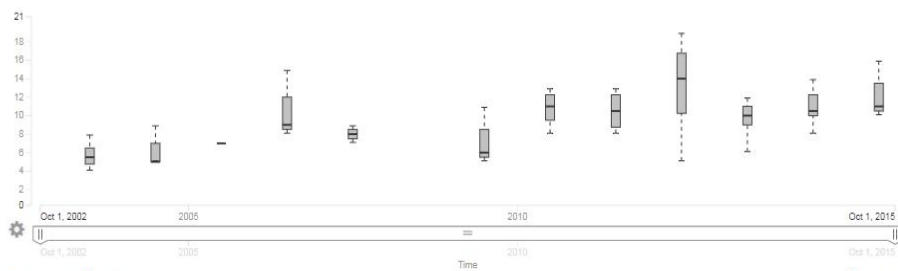
Saved charts

1 Richness (gamma)

Bering Arctic Subarctic Integrated Survey (BASIS) Fish Catch Surveys: Biodiversity Indexing

Polygon selection

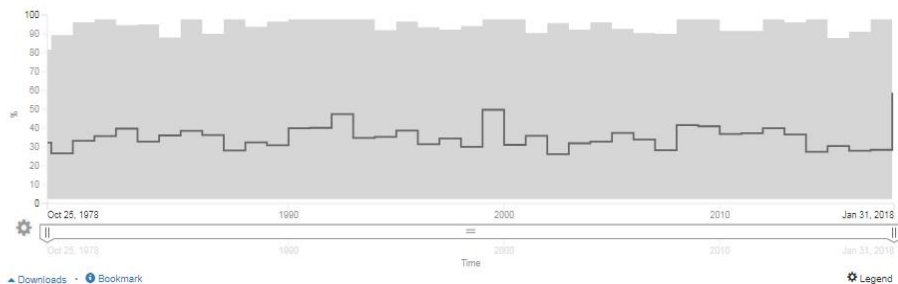
Chart: Box and whisker Autoscale Time bin : years Auto



2 Sea Ice Concentration

NSIDC Sea Ice Concentration
63.8504,-166.1462

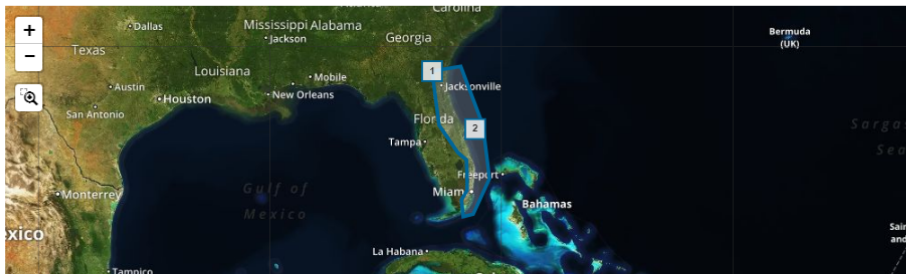
Chart: Line Autoscale Time bin : years Auto



Custom Data Views ('dashboards')

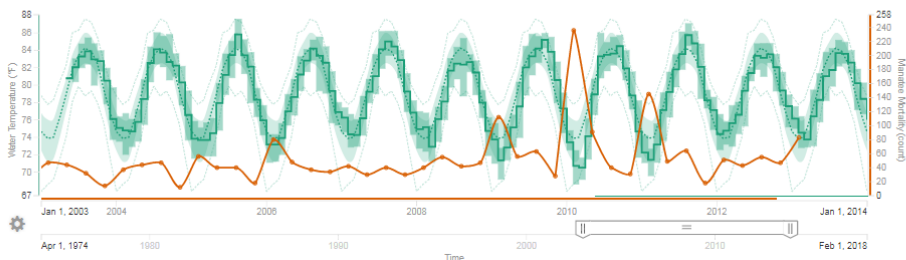
★ Manatee Mortality and Sea Surface Temperature (SST), Florida (1974-2013)

Load and launch map layers for this data view



Comparison chart

Autoscale Group axes on Parameter



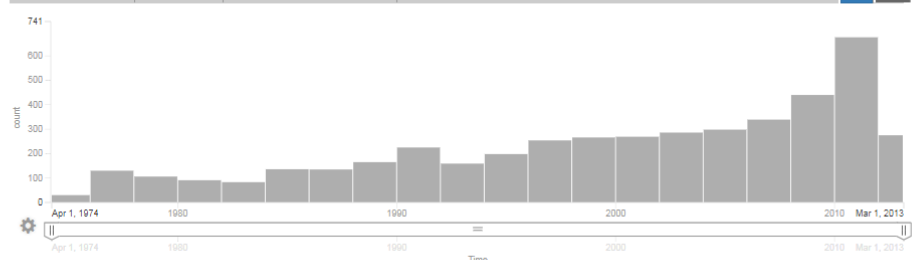
Water Temperature (°F)
GHRSSST Level 4 MUR Global Foundation Sea Surface Temperature Analysis (.01deg/1km)
28.4783,-80.0464 Time bin: months Auto

Manatee Mortality (count)
1 Manatee Mortality, Florida, USA
Polygon selection Time bin: Seasons

Saved charts

1 Manatee Mortality
Manatee Mortality, Florida, USA
Polygon selection

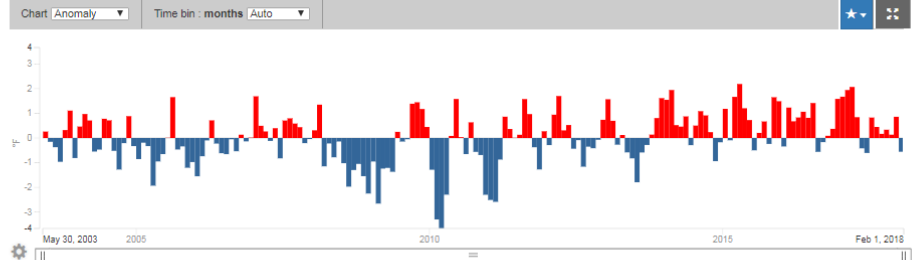
Chart Histogram Autoscale Time bin: 2-year Auto



Downloads Detail Legend

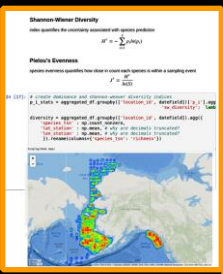
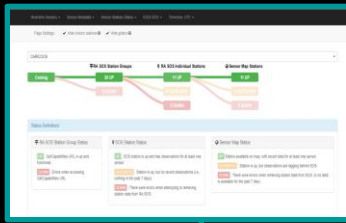
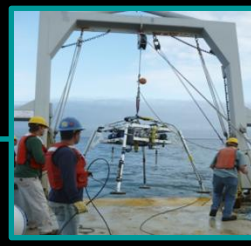
2 Sea Surface Temperature
GHRSSST Level 4 MUR Global Foundation Sea Surface Temperature Analysis (.01deg/1km)
28.4783,-80.0464

Chart Anomaly Time bin: months Auto



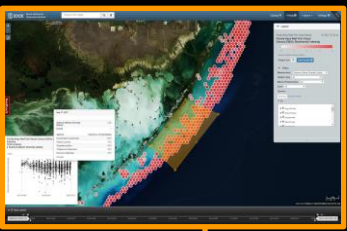
Downloads Bookmark

DATA CREATION & QUALITY CONTROL
Scientists or Ingestion



DATA STORAGE
Workspace

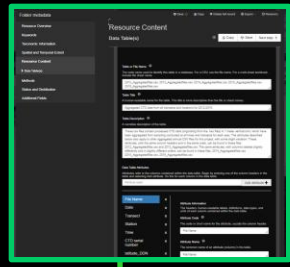
REUSE & TRANSFORMATION
Jupyter Notebook & data analyses



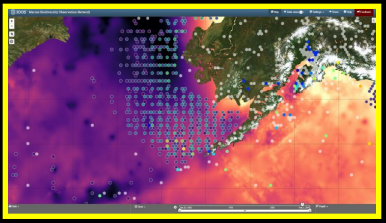
Data Lifecycle



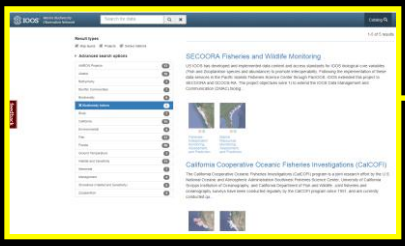
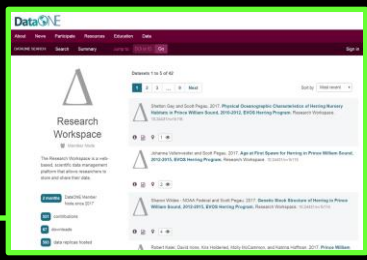
DATA DESCRIPTION
Metadata Editor




DATA ACCESS & DISCOVERY
Data portals & search catalogs



ARCHIVE & PRESERVATION
Repository submission pathway



MBON Data Catalog



1-5 of 5 results



Result types
 Map layers Projects Sensor stations

Advanced search options

AMBON Projects	13
Alaska	18
Bathymetry	1
Benthic Communities	7
Biodiversity	9
Biodiversity Indices	5
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Ground Temperature	1
Habitat and Sensitivity	11
Mammals	7
Management	4
Shorelines (Habitat and Sensitivity)	5
Zooplankton	4

SECOORA Fisheries and Wildlife Monitoring

US IOOS has developed and implemented data content and access standards for IOOS biological core variables (Fish and Zooplankton species and abundance) to promote interoperability. Following the implementation of these data services in the Pacific Islands Fisheries Science Center through PacIOOS, IOOS extended this project to SECOORA and GCOOS-RA. The project objectives were 1) to extend the IOOS Data Management and Communication (DMAC) biolog...





Fisheries-Independent Monitoring, Assessment, and Prediction

Marine Resources Monitoring, Assessment, and Prediction

California Cooperative Oceanic Fisheries Investigations (CalCOFI)

The California Cooperative Oceanic Fisheries Investigations (CalCOFI) program is a joint research effort by the U.S. National Oceanic and Atmospheric Administration Southwest Fisheries Science Center, University of California Scripps Institution of Oceanography, and California Department of Fish and Wildlife. Joint fisheries and oceanography surveys have been conducted regularly by the CalCOFI program since 1951, and are currently conducted qu...



Fish Counts

Egg Counts

feedback

Data Catalog

Content Pages

- Summary
- Data availability
- License / usage
- Variable / layer preview
- Contact information
- Original-source link

[← Back to Search Results](#)

Rockfish Recruitment and Ecosystem Assessment Survey

The Fisheries Ecology Division (FED), of the Southwest Fisheries Science Center (SWFSC) has conducted a midwater trawl survey off central California since 1983 with the primary goal of developing pre-recruit indices for young-of-the-year (YOY) rockfish (*Sebastes* spp.). The survey also samples numerous other components of the epipelagic micronekton, including other YOY groundfish (such as Pacific hake, *Merluccius productus*, and sanddab, *Citharichthys* spp.), coastal pelagic fishes (such as Pacific sardine, *Sardinops sagax*, and northern anchovy, *Engraulis mordax*) and other forage species.

Rockfish Recruitment and Ecosystem Assessment Survey

Download ▾

Portal +

- Metadata URL: <http://oceanview.pfeg.noaa.gov/erddap/in...>
- Date Range: 05/13/1990 11:52 - 08/12/2015 19:27

The Fisheries Ecology Division (FED), of the Southwest Fisheries Science Center (SWFSC) has conducted a midwater trawl survey off central California since 1983 with the primary goal of developing pre-recruit indices for young-of-the-year (YOY) rockfish (*Sebastes* spp.). The survey also samples numerous other components of the epipelagic micronekton, including other YOY groundfish (such as Pacific hake, *Merluccius productus*, and sanddab, *Citharichthys* spp.), coastal pelagic fishes (such as Pacific sardine, *Sardinops sagax*, and northern anchovy, *Engraulis mordax*) and other forage species.

Additional details regarding the survey methods and results are described in Ralston et al. (2015) and Sakuma et al. Ralston, S., J.C. Field and K.S. Sakuma. 2015. Longterm variation in a central California pelagic forage assemblage. *Journal of Marine Systems* 148: 28-37, <http://dx.doi.org/10.1016/j.jmarsys.2014.08.013>. Sakuma, K.M., J.C. Field, B.B. Marinovic, C.N. Camion, N.J. Mantua and S. Ralston. In revision. Anomalous epipelagic micronekton assemblage patterns in the neritic waters of the California Current in spring 2015 during a period of extreme ocean conditions. *CalCOFI Reports*.

Filter options: *Biodiversity indexes are not normalized!*

Alpha: Average of event values within the selected area

Gamma: Group all events within the selected area and treat them as a single sample

Beta: Gamma/Alpha ratio

Richness: Count of distinct species

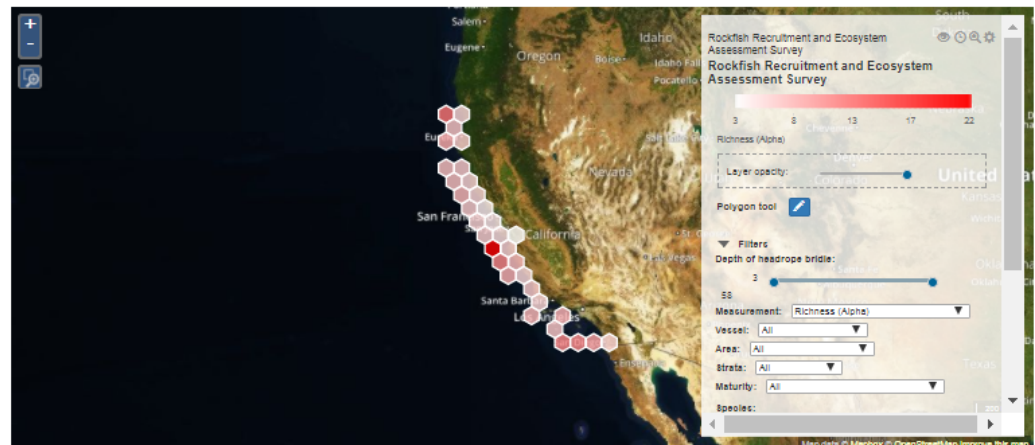
% Dominance (Berger-Parker): Numerical importance of the most abundant species

Shannon-Wiener Diversity: This index quantifies the uncertainty associated with species prediction

Pielou's Evenness: Species evenness quantifies how close in count each species is within a sampling event

Usage notes

The data may be used and redistributed for free but is not intended for legal use, since it may contain inaccuracies. Neither the data Contributor, ERD, NOAA, nor the United States Government, nor any of their employees or contractors, makes any warranty, express or implied, including warranties of merchantability and fitness for a particular purpose, or assumes any legal liability for the accuracy, completeness, or usefulness, of this information.



Downloads Using Interoperability

Egg Counts ▾

• Metadata URL: <http://oceanview.pfeg.noaa.gov/erddap/in...>

This layer includes fish egg counts and standardized counts for eggs captured in CalCOFI ichthyoplankton nets (primarily vertical [Calvet or Paironet], oblique [long-line trawling nets] and surface tows [Manta nets]). Surface tows are normally standardized to count per 1,000 m³ strained. Oblique tows are normally standardized to count per 10 m² of the area sampled. Egg densities include only tows where one or more eggs were captured for the species selected by the user, i.e., no "zero" tows. The "Egg Count" data set includes all tows for species, i.e., both positive and negative tows.

Filter options:

Alpha: takes the average of event values within the selected area
Gamma: groups all events within the selected area and treats them as a single sample
Beta: Gamma/Alpha

Richness: Count of distinct species
% Dominance (Bergin-Parker): Numerical importance of the most abundant species
Shannon-Wiener Diversity: This index quantifies the uncertainty associated with species prediction
Pielou's Evenness: Species evenness quantifies how close in count each species is within a sampling event

Download ▾ Portal +

California Cooperative Oceanic Fisheries Investigators (CalCOFI)
Egg

Count (all tows) (no. of individuals): 1 284,841 769,000 1,193,620 1,938,1

Layer opacity: [slider]

Polygon tool:

Filters: Measurement: Count (all tows)

Species: All

Taxonomy: Common names

All
 Baculiformes
 Copepodiformes
 Gastropodiformes
 Lampyridiformes

ncWMS
Shapefile
CSV
THREDDS
netCDF
OPenDAP
ERDDAP

1 Richness (gamma)

Bering Arctic Subarctic Integrated Survey (BASIS) Fish Catch Surveys: Biodiversity Indexing
Polynon selection

Calculated data

Binned years [icon]

Raw data

CSV	https://data.axds.co/gs/wfs?service=WFS&vers	[download icon]
Shape file	https://data.axds.co/gs/wfs?service=WFS&vers	[download icon]
JSON	https://data.axds.co/gs/wfs?service=WFS&vers	[download icon]

Oct 1, 2015

Oct 1, 2015

Legend

Downloads ▾ Detail

Downloads Using Interoperability

IOOS Marine Biodiversity Observation Network

Map Data views Settings Share Help Feedback

Calculated data

Binned years

Richness (gamma): Binned years

Download

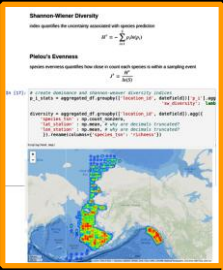
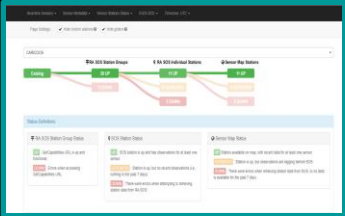
Start date	End date	Standard deviation	Mean	Median	Min	Max	25th Percentile	75th Percentile	Records (count)
2002-01-01T09:00:00Z	2003-01-01T09:00:00Z	2.170574210909016	7.15	7	3	13	6	9	80
2003-01-01T09:00:00Z	2004-01-01T09:00:00Z	1.9184774055368905	8.402777777777779	9	4	12	7	10	72
2004-01-01T09:00:00Z	2004-12-31T09:00:00Z	2.105904421084265	7.338983050847458	7	2	11	6	9	59
2005-01-01T09:00:00Z	2006-01-01T09:00:00Z	1.8770370566693648	8.403225806451612	8	6	12	7	9	62
2006-01-01T09:00:00Z	2007-01-01T09:00:00Z	2.2355280166167617	6.211267605633803	6	1	12	5	8	71
2007-01-01T09:00:00Z	2008-01-01T09:00:00Z	2.1591146826494776	6.763888888888889	6.5	3	12	5.75	8	72
2008-01-01T09:00:00Z	2008-12-31T09:00:00Z	2.2228757209048458	5.294117647058823	5	2	11	3.25	6.75	34
2009-01-01T09:00:00Z	2010-01-01T09:00:00Z	2.326488559956365	4.784313725490196	5	1	10	3	6	51
2010-01-01T09:00:00Z	2011-01-01T09:00:00Z	2.056893853588457	4.766666666666667	4.5	1	12	3	6	120
2011-01-01T09:00:00Z	2012-01-01T09:00:00Z	1.9327476835915351	4.397058823529412	4	1	9	3	6	68
2012-01-01T09:00:00Z	2012-12-31T09:00:00Z	2.4841259528915027	6.441558441558442	6	2	14	5	8	77
2014-01-01T09:00:00Z	2015-01-01T09:00:00Z	3.1831927446170645	8.641975308641975	8	3	16	6	11	81

Showing 1 to 13 of 13 entries

NOAA Center for Operational Oceanographic Products and Services (CO-OPS)
Village Cove, St. Paul Island

Chart Anomaly Time bin : months Auto

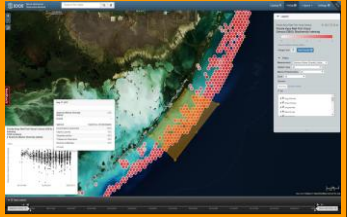
DATA CREATION & QUALITY CONTROL
Scientists or Ingestion



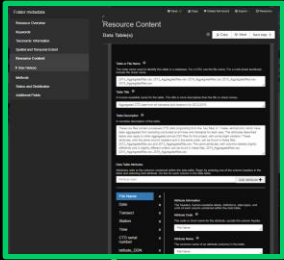
DATA STORAGE
Workspace

Data Lifecycle

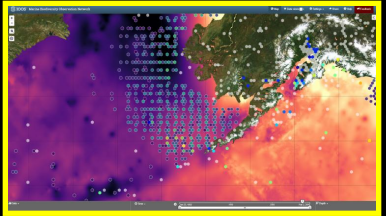
REUSE & TRANSFORMATION
Jupyter Notebook & data analyses



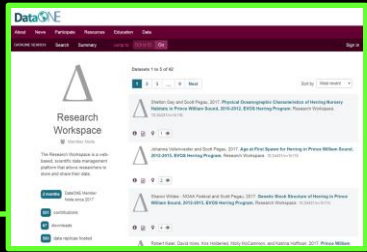
DATA DESCRIPTION
Metadata Editor



DATA ACCESS & DISCOVERY
Data portals & search catalogs



ARCHIVE & PRESERVATION
Repository submission pathway



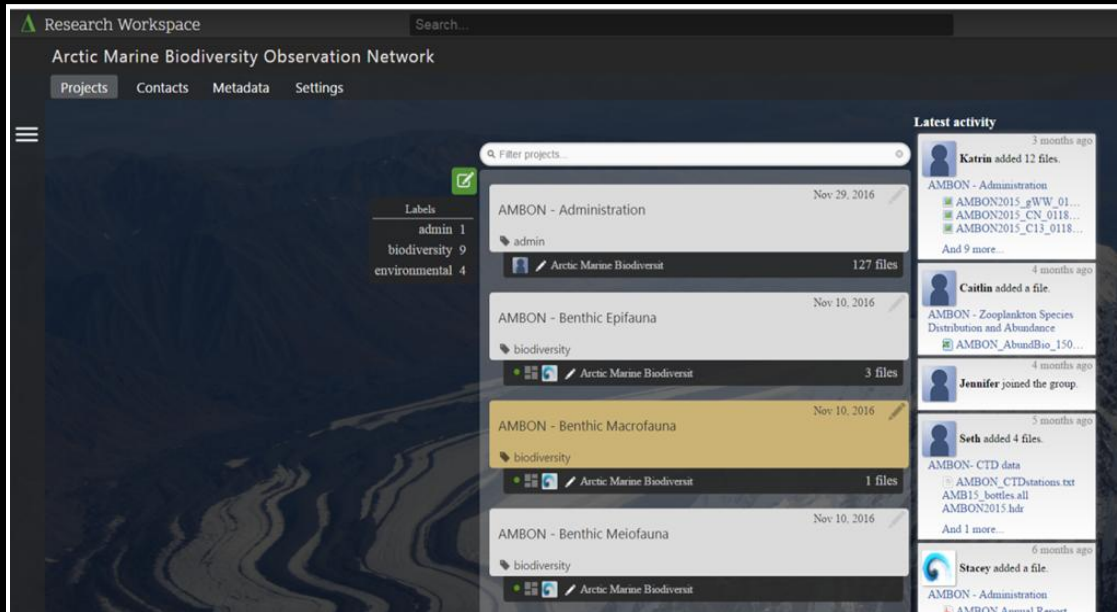
RESEARCH WORKSPACE

~web-based platform for collaboratively managing science projects through the entire data lifecycle~

Share
Analyze
Preserve

RESEARCH WORKSPACE

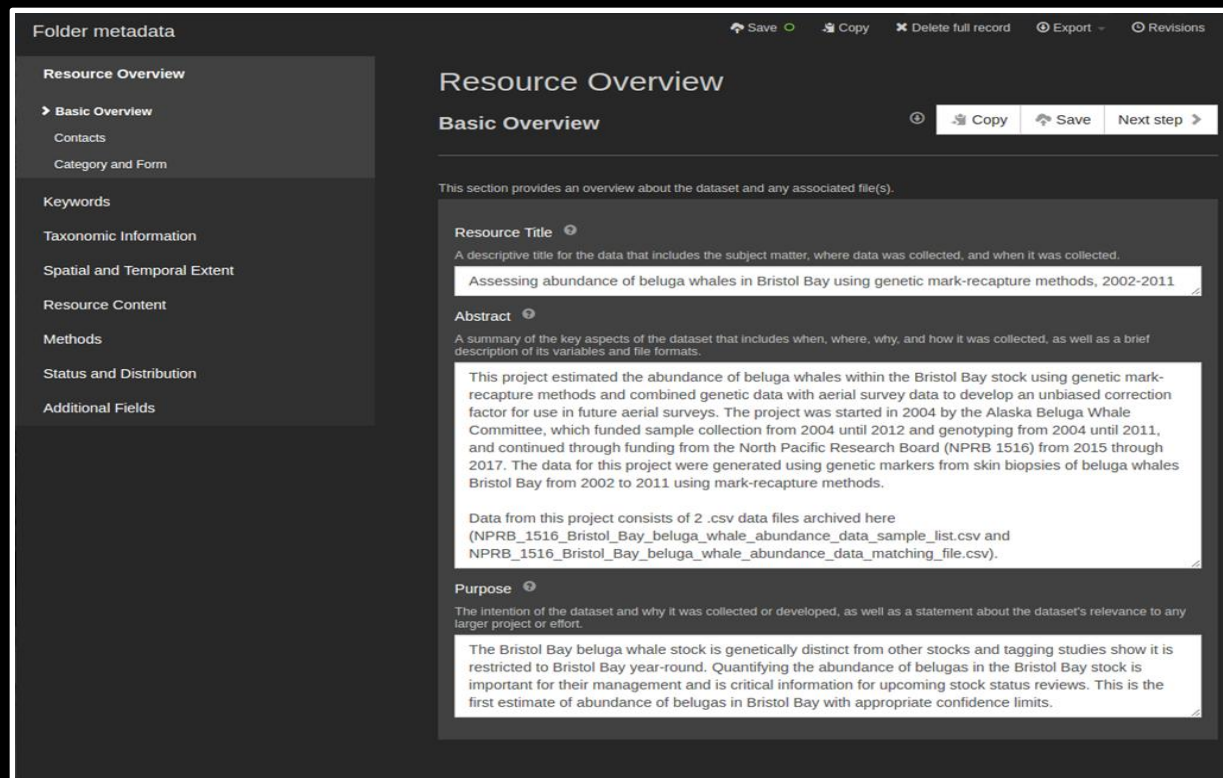
- Organize into projects, research campaigns and organizations
- Coordinate data exchange across networks, groups, programs
- ISO 19110/19115-2 standards metadata editor
- Execute server side R and Python numeric workflows (Jupyter) on uploaded data AND any data in Axiom CI stack
- Archive pathway to DataONE & Datacite DOI minting



The screenshot displays the Research Workspace interface for the Arctic Marine Biodiversity Observation Network (AMBON). The interface includes a search bar, navigation tabs (Projects, Contacts, Metadata, Settings), a sidebar with labels (admin 1, biodiversity 9, environmental 4), and a main content area listing projects like 'AMBON - Administration', 'AMBON - Benthic Epifauna', 'AMBON - Benthic Macrofauna', and 'AMBON - Benthic Meiofauna'. A 'Latest activity' panel on the right shows recent file additions and group joins.

RESEARCH WORKSPACE : Metadata

- Integrated ISO 19110/19115-2 standards metadata editor
- Author metadata alongside data
- Implement labor-saving tools



The screenshot displays the 'Resource Overview' page in the Research Triangle Workspace Metadata Editor. The interface is dark-themed and includes a sidebar on the left with a navigation menu. The main content area shows the 'Basic Overview' section, which is currently expanded. At the top right of the main area, there are utility buttons: Save, Copy, Delete full record, Export, and Revisions. The 'Basic Overview' section has its own sub-buttons: Copy, Save, and Next step. The content of the 'Basic Overview' section includes a 'Resource Title' field with the text 'Assessing abundance of beluga whales in Bristol Bay using genetic mark-recapture methods, 2002-2011', an 'Abstract' field with a detailed summary of the project, and a 'Purpose' field with information about the dataset's relevance to Bristol Bay beluga whale stock management.

Folder metadata

Save Copy Delete full record Export Revisions

Resource Overview

Basic Overview Copy Save Next step

This section provides an overview about the dataset and any associated file(s).

Resource Title

A descriptive title for the data that includes the subject matter, where data was collected, and when it was collected.

Assessing abundance of beluga whales in Bristol Bay using genetic mark-recapture methods, 2002-2011

Abstract

A summary of the key aspects of the dataset that includes when, where, why, and how it was collected, as well as a brief description of its variables and file formats.

This project estimated the abundance of beluga whales within the Bristol Bay stock using genetic mark-recapture methods and combined genetic data with aerial survey data to develop an unbiased correction factor for use in future aerial surveys. The project was started in 2004 by the Alaska Beluga Whale Committee, which funded sample collection from 2004 until 2012 and genotyping from 2004 until 2011, and continued through funding from the North Pacific Research Board (NPRB 1516) from 2015 through 2017. The data for this project were generated using genetic markers from skin biopsies of beluga whales Bristol Bay from 2002 to 2011 using mark-recapture methods.

Data from this project consists of 2 .csv data files archived here (NPRB_1516_Bristol_Bay_beluga_whale_abundance_data_sample_list.csv and NPRB_1516_Bristol_Bay_beluga_whale_abundance_data_matching_file.csv).

Purpose

The intention of the dataset and why it was collected or developed, as well as a statement about the dataset's relevance to any larger project or effort.

The Bristol Bay beluga whale stock is genetically distinct from other stocks and tagging studies show it is restricted to Bristol Bay year-round. Quantifying the abundance of belugas in the Bristol Bay stock is important for their management and is critical information for upcoming stock status reviews. This is the first estimate of abundance of belugas in Bristol Bay with appropriate confidence limits.



DataONE

About News Participate Resources Education Data

DATAONE SEARCH: Search Summary Jump to: DOI or ID Go

Search

Filter by:

- Data attribute
- Data files
- Member Node
 - Arctic Data Center
 - Biological and Chemical Oce...
 - Cornell Lab of Ornithology eBird
 - Dryad Digital Repository
 - [Show 35 more](#)
- Creator
- Year
- Identifier
- Taxon
- Location

Datasets 1 to 25 of 348,377

1 2 3 ... 13,936 Next Sort by Most recent

knb Rodrigo Damasco Daud, Samuel Nascimento Nunes, Jéssica Vieira Teixeira, Luciany Rodex Campos, and Vinicius de Souza Moraes. 2017. **Ácaros plantícolas do Cerrado: Parque Nacional das Emas.** Knowledge Network for Biocomplexity. Peld_cerrado.34.5.

knb Rodrigo Damasco Daud, Samuel Nascimento Nunes, and Jéssica Vieira Teixeira. 2017. **Ácaros plantícolas do Cerrado: Parque Nacional das Emas.** Knowledge Network for Biocomplexity. Peld_cerrado.34.4.

knb Rodrigo Damasco Daud, Luciany Rodex Campos, and Vinicius de Souza Moraes. 2017. **Aranhas (incompleto).** Knowledge Network for Biocomplexity. Peld_cerrado.35.2.

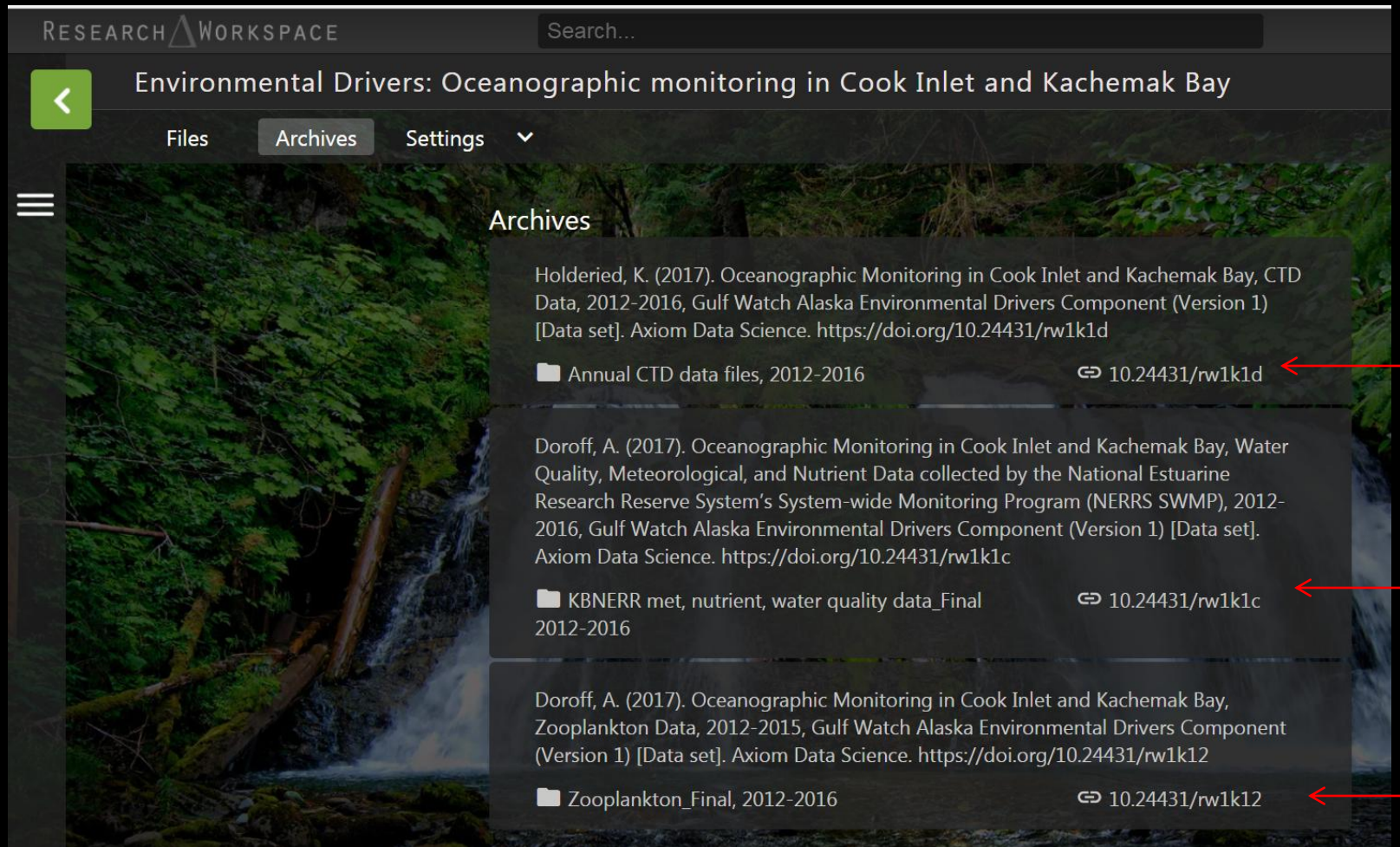
DRYAD Rivera-Rivera, Carlos and Montoya-Burgos, Juan. 2017. **Sequence ID table.** Dryad Digital Repository. <http://dx.doi.org/10.5061/dryad.2p6b5/5?ver=2017-09-15T16:35:53.995-04:00>.


DRYAD Rivera-Rivera, Carlos and Montoya-Burgos, Juan. 2017. **Trees.** Dryad Digital Repository. <http://dx.doi.org/10.5061/dryad.2p6b5/4?ver=2017-09-15T16:35:51.444-04:00>.

Hide Map

249	141	6	6	7	2	7
4843	95	14	11	6	15	16
2707	246	5	19	2	10	5
968	618	103	7	15	12	4
204	296	241	17	270	93	12
69	114	2072	1116	389	5240	1523
+	63	9688	5018	3809	974	3832
57	124	536	40701	12493	2868	3730
53	149	246	4969	17280	1290	6443
122	240	28	66	89	552	7931
718	33	13	40	117	311	350
17	24	14	34	84	112	150

- Locate, identify and cite research data



RESEARCH  WORKSPACE Search...

Environmental Drivers: Oceanographic monitoring in Cook Inlet and Kachemak Bay

Files Archives Settings ▾

Archives

Holderied, K. (2017). Oceanographic Monitoring in Cook Inlet and Kachemak Bay, CTD Data, 2012-2016, Gulf Watch Alaska Environmental Drivers Component (Version 1) [Data set]. Axiom Data Science. <https://doi.org/10.24431/rw1k1d>

Annual CTD data files, 2012-2016 [10.24431/rw1k1d](https://doi.org/10.24431/rw1k1d)

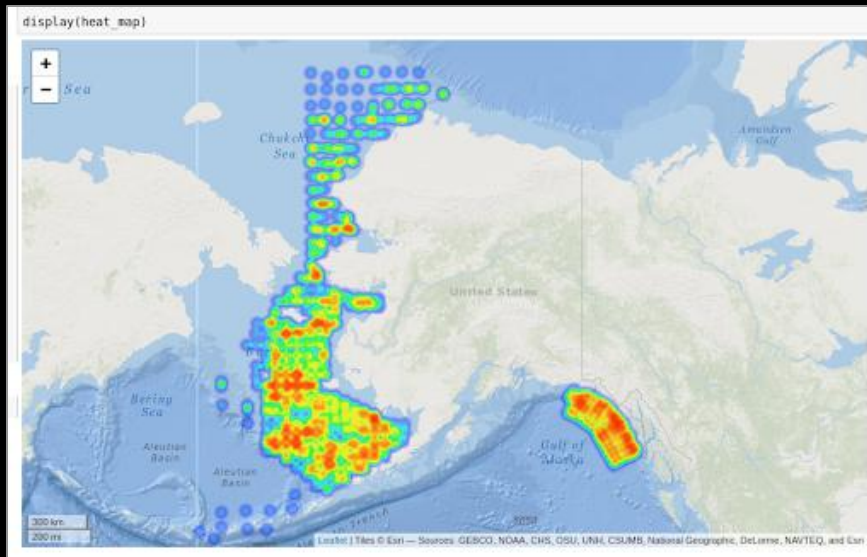
Doroff, A. (2017). Oceanographic Monitoring in Cook Inlet and Kachemak Bay, Water Quality, Meteorological, and Nutrient Data collected by the National Estuarine Research Reserve System's System-wide Monitoring Program (NERRS SWMP), 2012-2016, Gulf Watch Alaska Environmental Drivers Component (Version 1) [Data set]. Axiom Data Science. <https://doi.org/10.24431/rw1k1c>

KBNERR met, nutrient, water quality data_Final 2012-2016 [10.24431/rw1k1c](https://doi.org/10.24431/rw1k1c)

Doroff, A. (2017). Oceanographic Monitoring in Cook Inlet and Kachemak Bay, Zooplankton Data, 2012-2015, Gulf Watch Alaska Environmental Drivers Component (Version 1) [Data set]. Axiom Data Science. <https://doi.org/10.24431/rw1k12>

Zooplankton_Final, 2012-2016 [10.24431/rw1k12](https://doi.org/10.24431/rw1k12)

- Create and share documents that contain code, equations, and visualizations
- Reproducible numerical simulations and statistical modeling
- Access uploaded data stored in the Workspace



Richness

the number of distinct species found in a sample

$$S = \sum (p_i > 0)$$

% Dominance (Berger-Parker)

the ratio between the number of individuals belonging to the most abundant species and the total number of individuals in the sample

$$\text{Dominance} = \max(p_i)$$

Shannon-Wiener Diversity

index quantifies the uncertainty associated with species prediction

$$H' = - \sum_{i=1}^S p_i \ln(p_i)$$

Pielou's Evenness

species evenness quantifies how close in count each species is within a sampling event

$$J' = \frac{H'}{\ln(S)}$$

```
In [17]: # create dominance and shannon-weaver diversity indices
p_i_stats = aggregated_df.groupby(['location_id', dateField])['p_i'].agg(
    'sw_diversity': Lamb

diversity = aggregated_df.groupby(['location_id', dateField]).agg({
    'species_tsn': np.count_nonzero,
    'lat_station': np.mean, # why are decimals truncated?
    'lon_station': np.mean, # why are decimals truncated?
})

diversity = diversity.merge(p_i_stats, left_index=True, right_index=True

# add Pielou's Evenness Index
diversity['evenness'] = diversity['sw_diversity']/np.log(diversity['rich

diversity = diversity.reset_index(level=[dateField, 'location_id'])
diversity
```

Richness

the number of distinct species found in a sample

$$S = \sum (p_i > 0)$$

% Dominance (Berger-Parker)

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    'sw_diversity': lamb

diversity = aggregated_df.groupby(['location_id', dateField]).agg({
    'species_tsn': np.count_nonzero,
    'lat_station': np.mean, # why are decimals truncated?
    'lon_station': np.mean, # why are decimals truncated?
}).rename(columns={'species_tsn': 'richness'})

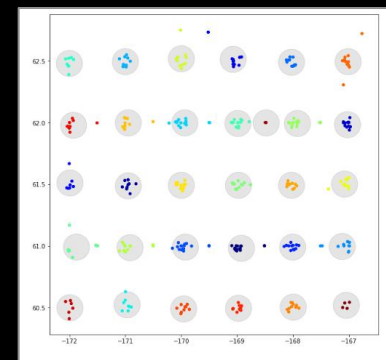
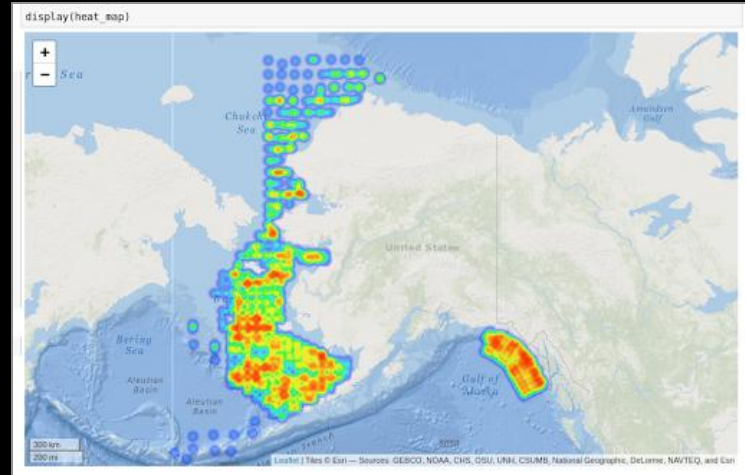
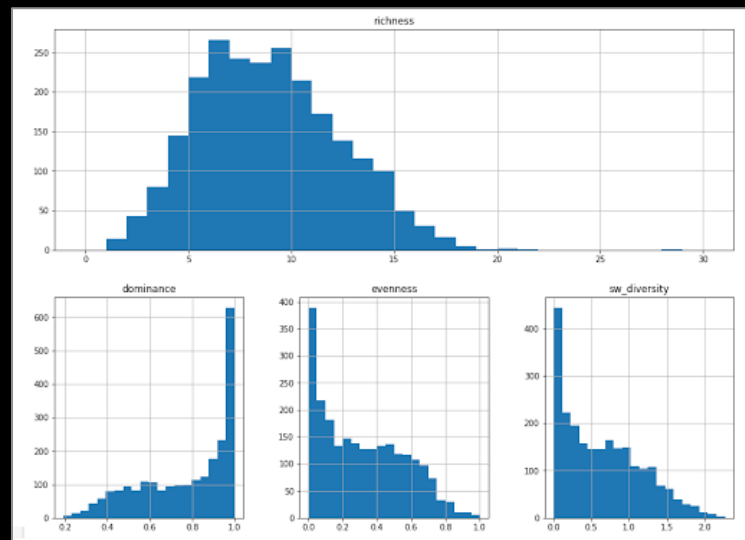
diversity = diversity.merge(p_i_stats, left_index=True, right_index=True)

# add Pielou's Evenness Index
diversity['evenness'] = diversity['sw_diversity']/np.log(diversity['richness'])

diversity = diversity.reset_index(level=[dateField, 'location_id'])
diversity
```

```
Out[17]:
```

	location_id	start_date	lat_station	richness	lon_station	sw_diversity	dominance	even
0	1	2002-09-19 18:30:00	51.295745	4	-178.344080	1.036659	0.587719	0.74
1	4	2002-09-12 20:08:00	51.718330	4	-179.724165	0.352634	0.920635	0.25
2	5	2002-09-20	51.837745	2	-179.019500	0.660918	0.761005	0.66



Live Demo

<http://mbon.ioos.us/>