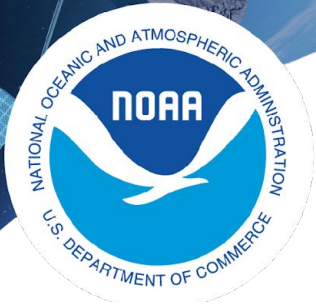


NOAA CoastWatch/PacIOOS Satellite and Ocean Data Training Course Feb.10-13,
virtual, 9am (FJT)



Introduction to ERDDAP

(Environmental Research Division's Data Access Program)

NOAA CoastWatch Satellite Course

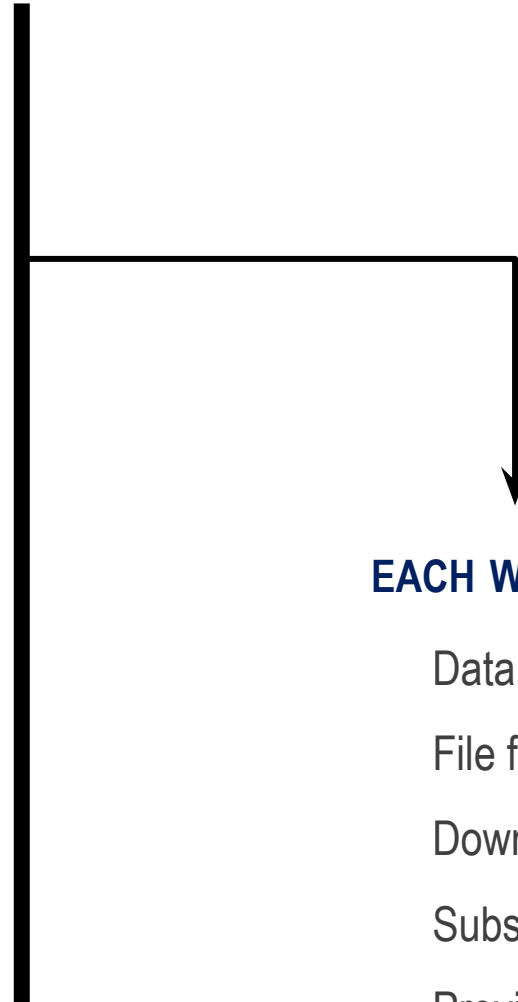
coastwatch.info@noaa.gov



Accessing satellite data can be challenging

A SHORT LIST OF DATA SERVERS

NOAA CoastWatch Central Operations
NOAA Center for Satellite Applications and Res.
NOAA Office of Satellite and Products
NOAA National Centers for Environmental Info.
NOAA Comprehensive Large Array-data
Stewardship System (CLASS)
NASA Jet Propulsion Laboratory PO.DAAC
NASA Ocean Biology (OB.DAAC)
NASA Goddard Space Flight Center
European Space Agency
EUMETSAT
Japan Aerospace Exploration Agency



EACH WITH ITS OWN

Data products
File formats
Download protocols
Subsetting abilities
Previewing abilities



ERDDAP – designed to make data access easier

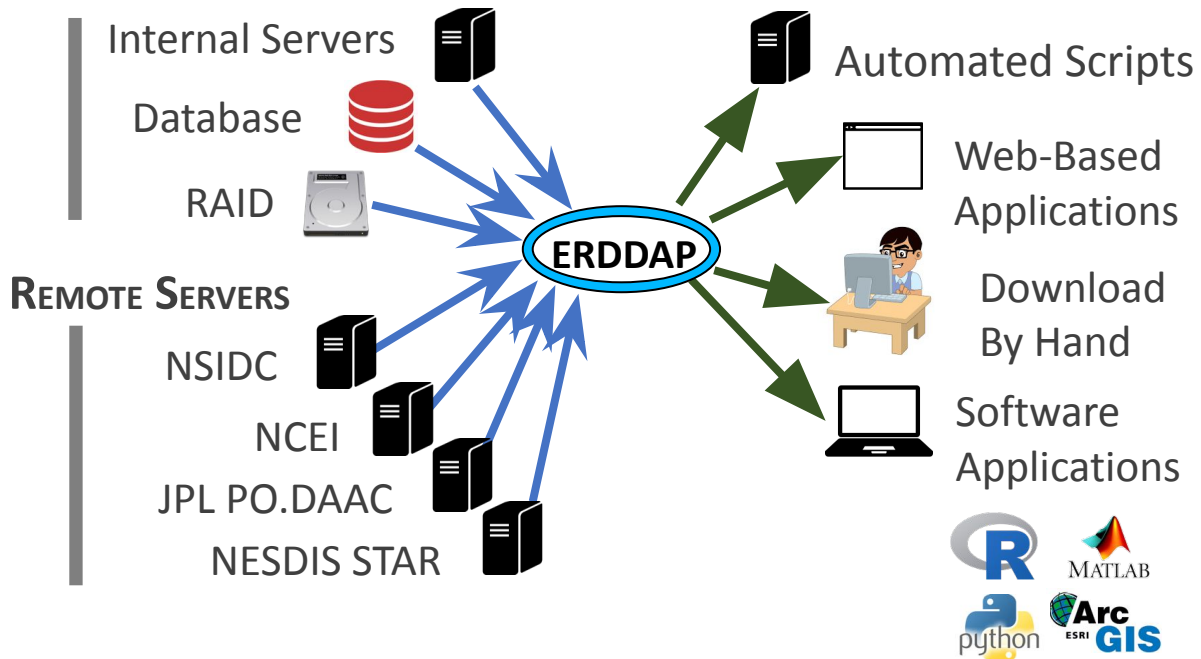
DATA AGGREGATION

LOCAL STORAGE

Internal Servers
Database
RAID

REMOTE SERVERS

NSIDC
NCEI
JPL PO.DAAC
NESDIS STAR



DATA DISTRIBUTION

ERDDAP provides a simple, consistent way to:

- Subset datasets temporally and spatially
- Distribute both gridded and non-gridded (tabular) data
- Download data in > 30 formats
- A graphical interface for humans with browsers
- Data requests defined within URLs, allowing:
 - Machine-to-machine data exchange and access data within analysis tools (R, Matlab, python)

Over 85 ERDDAPs exist worldwide

Over a dozen different ERDDAPs in NOAA

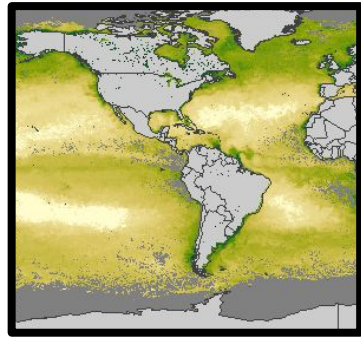
ERDDAP is one of the recommended data servers in NOAA's Data Access Procedural Directive

Search for data across multiple ERDDAPs at erddap.com

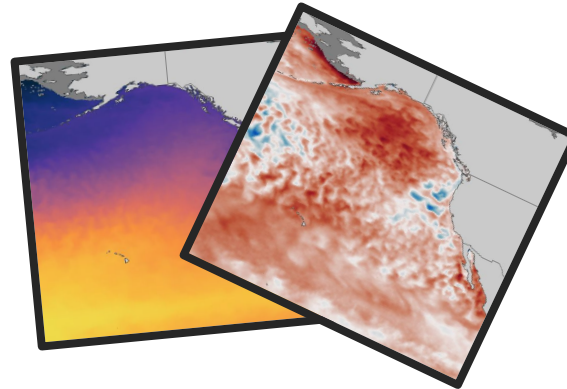
**ERDDAP was developed at NOAA NMFS SWFSC
Environmental Research Division (ERD) by Bob Simons**



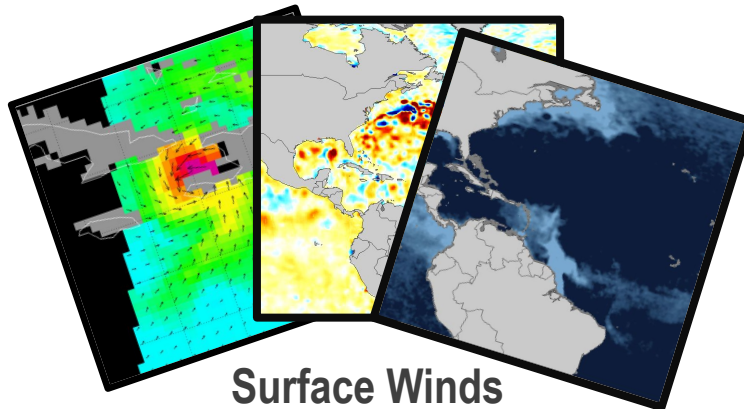
NOAA/ERD ERDDAP contains > 1000 satellite datasets



**Chlorophyll
Primary Productivity**



**SST
SST Anomaly**



**Surface Winds
Sea Surface Salinity
Sea Surface Height and Anomaly**

0.5 – 1 million data requests per day

- Daily, weekly, and monthly composites
- Blended products
- Interpolated products (gap free)
- All level 3 or 4 products (i.e. on a regular XY grid)

This ERDDAP is maintained jointly by the
[SWFSC Environmental Research Division](#) and the
[West Coast Node of NOAA's CoastWatch](#) program

ERD ERDDAP data catalog has >400 non-satellite datasets

In Situ Measurements

- Animal Telemetry Network
- ARGO floats
- TAO/TRITON, RAMA, & PIRATA Buoys
- IOOS In Situ Sensors
- Glider Data
- Global Temperature and Salinity Profile Programme
- HF Radar Currents
- GLOBEC Northeast Pacific
- NOAA CO-OPS Sensors
- NDBC buoys

Field Sampling

- CalCOFI
- California Fish Landings
- Farallon Island Seabirds
- NWFSC Habitat Use
- SWFSC Rockfish

Underway Data

- NOAA Vessels
- UNOLS Vessels

Models, Climatologies

- OSCAR Sea Surface Velocity
- SODA Model

Models, Climatologies (cont.)

- NOAA Coastal Relief Model
- NOAA RTOFS Forecast Model
- NOAA RTOFS Nowcast Model
- NOAA World Ocean Atlas
- NOAA Seafloor Topography
- SWFSC Upwelling Index
- Navy NAVGEM Model
- Navy NOGAPS Model
- NCEP/NCAR Reanalysis
- USGS Topography
- NASA/NOAA CCMP Wind Atlas
- Navy HYCOM Model
- Navy FNMOC Forecast Model



The ERDDAP interface is functionally beautiful



ERDDAP

Easier access to scientific data

ERDDAP > List of All Datasets

1392 matching datasets, listed in alphabetical order. View page: 1 (current) 2 .

Grid DAP Data	Sub-set	Table DAP Data	Make A Graph	W M S	Source Data Files	Access-ible	Title	Sum-mary	FGDC, ISO, Metadata	Back-ground Info	RSS	E mail	Institution	Dataset ID
	set	data	graph			public	* The List of All Active Datasets in this ERDDAP *		M	background			NOAA NMFS SWFSC E...	allDatasets
data			graph			public	AMSRE Model Output, obs4MIPs NASA-JPL, Global, 1 Degree, 2002-2010, Monthly		F I M	background	RSS		Remote Sensing Sy...	jplAmsreSstMon
data			graph	M		public	AMSRE Model Output, obs4MIPs NASA-JPL, Global, 1 Degree, 2002-2010, Monthly, Lon+/-180		F I M	background	RSS		Remote Sensing Sy...	jplAmsreSstMon_LonPM180
		data	graph		files	public	AN EXPERIMENTAL DATASET: Underway Sea Surface Temperature and Salinity Aboard the Oleander, 2007-2010		F I M	background	RSS		NOAA OAR AOML	nodcPJJU
	set	data	graph			public	Animal Telemetry Network (ATN)		F I M	background	RSS		Animal Telemetry ...	gtoppAT
data			graph	M		public	Aquarius Sea Surface Salinity, L3 SMI, Version 5, 1.0°, Global, 2011-2015, 3-Month		F I M	background	RSS		NASA/GSFC OBPG	jplAquariusSSS3MonthV5
data			graph	M		public	Aquarius Sea Surface Salinity, L3 SMI, Version 5, 1.0°, Global, 2011-2015, 7-Day		F I M	background	RSS		NASA/GSFC OBPG	jplAquariusSSS7DayV5
data			graph	M		public	Aquarius Sea Surface Salinity, L3 SMI, Version 5, 1.0°, Global, 2011-2015, Daily		F I M	background	RSS		NASA/GSFC OBPG	jplAquariusSSSDailyV5
data			graph	M		public	Aquarius Sea Surface Salinity, L3 SMI, Version 5, 1.0°, Global, 2011-2015, Monthly		F I M	background	RSS		NASA/GSFC OBPG	jplAquariusSSSMonthlyV5
data			graph		files	public	Audio data from a local source.		M	background	RSS		???	testGridWav
	set	data	graph		files	public	Audio data from a local source.		M	background	RSS		???	testTableWav
data			graph	M		public	AVHRR Pathfinder Version 5.3 L3-Collated (L3C) SST, Global, 0.0417°, 1981-present, Daytime (1 Day Composite)		F I M	background	RSS		NCEI	nceiPH53sstd1day
data			graph	M		public	AVHRR Pathfinder Version 5.3 L3-Collated (L3C) SST, Global, 0.0417°, 1981-present, Nighttime (1 Day Composite)		F I M	background	RSS		NCEI	nceiPH53sstin1day
data			graph			public	AVISO Model Output, obs4MIPs NASA-JPL, Global, 1 Degree, 1992-2010, Monthly		F I M	background	RSS		Centre National d...	jplAvisoSshMon
data			graph	M		public	AVISO Model Output, obs4MIPs NASA-JPL, Global, 1 Degree, 1992-2010, Monthly, Lon+/-180		F I M	background	RSS		Centre National d...	jplAvisoSshMon_LonPM180
data			graph	M	files	public	C-HARM 1-Day Advanced Forecast: Pseudo-Nitzschia, cellular domoic acid, and particulate domoic acid probability, California and Southern Oregon coast		F I M	background	RSS		UCSC, UCSD	charmForecast1day
data			graph	M	files	public	C-HARM 2-Day Advanced Forecast: Pseudo-Nitzschia, cellular domoic acid, and particulate domoic acid probability, California and Southern Oregon coast		F I M	background	RSS		UCSC, UCSD	charmForecast2day
data			graph	M	files	public	C-HARM 3-Day Advanced Forecast: Pseudo-Nitzschia, cellular domoic acid, and particulate domoic acid probability, California and Southern Oregon coast		F I M	background	RSS		UCSC, UCSD	charmForecast3day
data			graph	M	files	public	C-HARM Nowcast: Pseudo-Nitzschia, cellular domoic acid, and particulate domoic acid probability, California and Southern Oregon coast		F I M	background	RSS		UCSC, UCSD	charmForecast0day
	set	data	graph			public	CalCOFI Continuous Underway Fish-Egg Sampler		F I M	background	RSS		NOAA SWFSC	erdCalCOFIcufes
	set	data	graph			public	CalCOFI Cruises		M	background	RSS		NOAA SWFSC	erdCalCOFicruises



Finding datasets on ERDDAP



ERDDAP

Easier access to scientific data

log in | English - English  
Brought to you by NOAA NMFS SWFSC ERD

ERDDAP

ERDDAP is a data server that gives you a simple, consistent way to download subsets of scientific datasets in common file formats and make graphs and maps. This particular ERDDAP installation has oceanographic data (for example, data from satellites and buoys).

Easier Access to Scientific Data

Our focus is on making it easier for you to get scientific data.

Different scientific communities have developed different types of data servers.

For example, OPeNDAP, WCS, SOS, OBIS, and countless custom web pages with forms. Each is great on its own. But without ERDDAP, it is difficult to get data from different types of servers:

- Different data servers make you format your data request in different ways.
- Different data servers return data in different formats, usually not the common file format that you want.
- Different datasets use different formats for time data, so the results are hard to compare.

ERDDAP unifies the different types of data servers so you have a consistent way to get the data you want, in the format you want.

Start Using ERDDAP: Search for Interesting Datasets

- **Do a Full Text Search for Datasets**

- **View a List of All 3,086 Datasets**
- **Search for Datasets by Category**

Datasets can be categorized in different ways by the values of various metadata attributes. Click on an attribute ([cdm_data_type](#), [institution](#), [ioos_category](#), [keywords](#), [long_name](#), [standard_name](#), [variableName](#)) to see a list of categories (values) for that attribute. Then, you can click on a category to see a list of relevant datasets.

- **Search for Datasets with Advanced Search** 

<https://coastwatch.pfeg.noaa.gov/erddap/index.html>



Finding datasets on ERDDAP

ERDDAP > Search

Do a Full Text Search for Datasets:

Coral Reef Watch

7 matching datasets, with the most relevant ones listed first.
(Or, refine this search with [Advanced Search](#))

Grid DAP Data	Sub-set	Table DAP Data	Make A Graph	W M S	Source Data Files	Access-ible	Title	Sum-mary	FGDC, ISO, Metadata	Back-ground Info
data			graph	M		public	NOAA Coral Reef Watch Operational Daily Near-Real-Time Global 5-km Satellite Coral Bleaching Monitoring Products	?	F I M	background
data			graph	M		public	NOAA Coral Reef Watch Operational Daily Near-Real-Time Global 5-km Satellite Coral Bleaching Monitoring Products, Lon0360	?	F I M	background
data			graph	M	files	public	SST and SST Anomaly, NOAA Global Coral Bleaching Monitoring, 5km, V.3.1, Monthly, 1985-Present	?	F I M	background
data			graph	M	files	public	SST and SST Anomaly, NOAA Global Coral Bleaching Monitoring, 5km, V.3.1, Monthly, 1985-Present, Lon0360	?	F I M	background
data			graph	M	files	public	Relative Bycatch:Target Catch Probability Product (daily), EcoCast Project	?	F I M	background
data			graph	M	files	public	Relative Bycatch:Target Catch Probability Product (daily), EcoCast Project, Lon0360	?	F I M	background
		data	graph		files	public	Ecocast species weightings and environmental data dates	?	M	background

The information in the table above is also available in other file formats (.csv, .htmlTable, .itx, .json, .jsonlCSV1, .jsonlCSV, .jsonlKVP, .mat, .nc, .nccsv, .tsv, .xhtml) [via a RESTful web service](#).



Visualizing datasets

ERDDAP > griddap > Make A Graph

Graph Type:

- Maps (surface)
- Time-series (lines)
- Hovmöller (surface)
- Vectors (vectors)

Color:

Choose variable in dataset

Scale:

Choose linear or log

Color Bar:

Choose from > 40 color palettes

File Type:

Choose from > 40 file formats
(data and graphics)

Dataset Title: **SST and SST Anomaly, NOAA Global Coral Bleaching Monitoring, 5km, V.3.1, Monthly, 1985-Present, Lon0360** [✉](#) [RSS](#)

Institution: NOAA/NESDIS/STAR Coral Reef Watch program (Dataset ID: NOAA_DHW_monthly_Lon0360)
Information: [Summary](#) | [License](#) | [FGDC](#) | [ISO 19115](#) | [Metadata](#) | [Background](#) | [Data Access Form](#) | [Files](#)

Graph Type: surface
X Axis: longitude
Y Axis: latitude
Color: sea_surface_temperature

Dimensions: time (UTC) Start: 2024-10-16T00:00:00Z Stop: specify just 1 value →
latitude (degrees_north): 89.975 -89.975
longitude (degrees_east): 0.025 359.975

Graph Settings

Color Bar: Continuity: Scale:
Minimum: Maximum: N Sections:
Draw land mask:
Y Axis Minimum: Maximum: Ascending

Redraw the Graph (Please be patient. It may take a while to get the data.)

Optional:

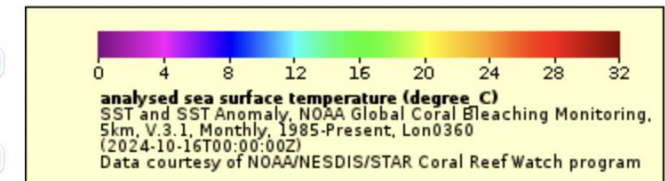
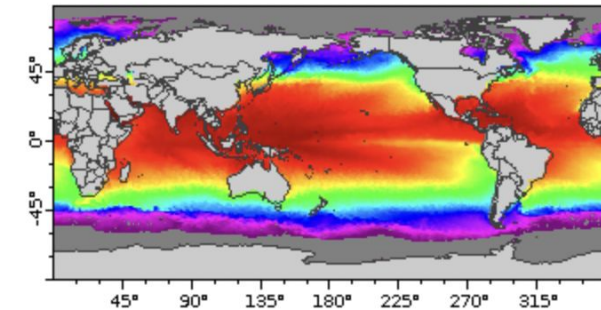
Then set the File Type: .htmlTable (File Type information)

and [Download the Data or an Image](#)

or view the URL: https://coastwatch.pfeg.noaa.gov/erddap/griddap/NOAA_DHW_monthly_Lon0360
([Documentation](#) / [Bypass this form](#))

Click on the map to specify a new center point.

Zoom: [Data](#) [Out 8x](#) [Out 2x](#) [Out](#) [In](#) [In 2x](#) [In 8x](#)



Downloading datasets to a format of your choice

Can subset by time, latitude or longitude (for gridded datasets)

File Type:

Choose from > 40 file formats (data and graphics)

ERDDAP > griddap > Data Access Form

Dataset Title: **SST and SST Anomaly, NOAA Global Coral Bleaching Monitoring, 5km, V.3.1, Monthly, 1985-Present, Lon0360** [✉](#) [RSS](#)

Institution: NOAA/NESDIS/STAR Coral Reef Watch program (Dataset ID: NOAA_DHW_monthly_Lon0360)
Information: [Summary](#) | [License](#) | [FGDC](#) | [ISO 19115](#) | [Metadata](#) | [Background](#) | [Files](#) | [Make a graph](#)

Dimensions	Start	Stride	Stop	Size	Spacing
<input checked="" type="checkbox"/> time (UTC)	2024-10-16T00:00:00Z	1	2024-10-16T00:00:00Z	478	30 days 10h 27m 55s (uneven)
<input checked="" type="checkbox"/> latitude (degrees_north)	89.975	1	-89.975	3600	-0.05 (uneven)
<input checked="" type="checkbox"/> longitude (degrees_east)	0.025	1	359.975	7200	0.05 (uneven)

Grid Variables (which always also download all of the dimension variables) [Check All](#) [Uncheck All](#)

- sea_surface_temperature (degree_C)
- mask (Pixel characteristics flag array, pixel_classification)
- sea_surface_temperature_anomaly (degree_C)

File type: [\(more information\)](#)

.htmlTable - View a UTF-8 .html web page with the data in a table. Times are ISO 8601 strings.

Just generate the URL:

[\(Documentation / Bypass this form\)](#)

Submit (Please be patient. It may take a while to get the data.)



Downloading datasets to a format of your choice

.asc - View OPeNDAP-style ISO-8859-1 comma-separated text.
.csv - Download a ISO-8859-1 comma-separated text table (line 1: names; line 2: units; ISO 8601 times).
.csvp - Download a ISO-8859-1 .csv file with line 1: name (units). Times are ISO 8601 strings.
.csv0 - Download a ISO-8859-1 .csv file without column names or units. Times are ISO 8601 strings.
.das - View the dataset's metadata via an ISO-8859-1 OPeNDAP Dataset Attribute Structure (DAS).
.dds - View the dataset's structure via an ISO-8859-1 OPeNDAP Dataset Descriptor Structure (DDS).
.dods - OPeNDAP clients use this to download the data in the DODS binary format.
.esriAscii - Download an ISO-8859-1 ESRI ASCII file (latitude longitude data only; longitude must be all below or all above 180).
.fgdc - View the dataset's UTF-8 FGDC .xml metadata.
.graph - View a Make A Graph web page.
.help - View a web page with a description of griddap.
.html - View an OPeNDAP-style HTML Data Access Form.
.htmlTable - View a UTF-8 .html web page with the data in a table. Times are ISO 8601 strings.
.iso19115 - View the dataset's ISO 19115-2/19139 UTF-8 .xml metadata.
.itx - Download an ISO-8859-1 Igor Text File. Each axis variable and each data variable becomes a wave.
.json - View a table-like UTF-8 JSON file (missing value = 'null'; times are ISO 8601 strings).
.jsonlCSV1 - View a UTF-8 JSON Lines CSV file with column names on line 1 (mv = 'null'; times are ISO 8601 strings).
.jsonlCSV - View a UTF-8 JSON Lines CSV file without column names (mv = 'null'; times are ISO 8601 strings).
.jsonlKVP - View a UTF-8 JSON Lines file with Key:Value pairs (missing value = 'null'; times are ISO 8601 strings).
.mat - Download a MATLAB binary file.
✓ .nc - Download a NetCDF-3 binary file with COARDS/CF/ACDD metadata.
.ncHeader - View the UTF-8 header (the metadata) for the NetCDF-3 .nc file.
.ncml - View the dataset's structure and metadata as a UTF-8 NCML .xml file.
.nccsv - Download a NetCDF-3-like 7-bit ASCII NCCSV .csv file with COARDS/CF/ACDD metadata.
.nccsvMetadata - View the dataset's metadata as the top half of a 7-bit ASCII NCCSV .csv file.
.ncoJson - Download a UTF-8 NCO lvl=2 JSON file with COARDS/CF/ACDD metadata.
.odvTxt - Download time,latitude,longitude,otherVariables as an ODV Generic Spreadsheet File (.txt).
.parquet - Download as a parquet file. Metadata contains column names ("column_names") and units ("column_units").
.parquetWMeta - Download as a parquet file with detailed metadata.
.timeGaps - View a UTF-8 list of gaps in the time values which are larger than the median gap.
.tsv - Download a ISO-8859-1 tab-separated text table (line 1: names; line 2: units; ISO 8601 times).
.tsvp - Download a ISO-8859-1 .tsv file with line 1: name (units). Times are ISO 8601 strings.
.tsv0 - Download a ISO-8859-1 .tsv file without column names or units. Times are ISO 8601 strings.
.wav - Download a .wav audio file. All columns must be numeric and of the same type.
.xhtml - View a UTF-8 XHTML (XML) file with the data in a table. Times are ISO 8601 strings.
.geotif - View a grayscale GeoTIFF .tif file (for latitude longitude data; longitude must be all below or all above 180).

ERDDAP > griddap > Data Access Form

Dataset Title: **SST and SST Anomaly, NOAA Global Coral Bleaching Monitoring, 5km, V.3.1, Monthly, 1985-Present, Lon0360**  

Institution: NOAA/NESDIS/STAR Coral Reef Watch program (Dataset ID: NOAA_DHW_monthly_Lon0360)
Information: [Summary](#) | [License](#) | [FGDC](#) | [ISO 19115](#) | [Metadata](#) | [Background](#) | [Files](#) | [Make a graph](#)

Dimensions	Start	Stride	Stop	Size	Spacing
<input checked="" type="checkbox"/> time (UTC)	2024-10-16T00:00:00Z	1	2024-10-16T00:00:00Z	478	30 days 10h 27m 55s (uneven)
<input checked="" type="checkbox"/> latitude (degrees_north)	89.975	1	-89.975	3600	-0.05 (uneven)
<input checked="" type="checkbox"/> longitude (degrees_east)	0.025	1	359.975	7200	0.05 (uneven)

Grid Variables (which always also download all of the dimension variables)

- sea_surface_temperature (degree_C)
- mask (Pixel characteristics flag array, pixel_classification)
- sea_surface_temperature_anomaly (degree_C)

File type: [\(more information\)](#)



Just generate the URL:

[\(Documentation / Bypass this form\)](#)

(Please be patient. It may take a while to get the data.)



Marine heat event in the southwest Pacific during Feb. 2016

ERDDAP > griddap > Make A Graph

https://coastwatch.pfeg.noaa.gov/erddap/griddap/NOAA_DHW_monthly_Lon0360.graph?sea_surface_temperature_anomaly

Dataset Title: **SST and SST Anomaly, NOAA Global Coral Bleaching Monitoring, Monthly, 1985-Present, Lon0360**  

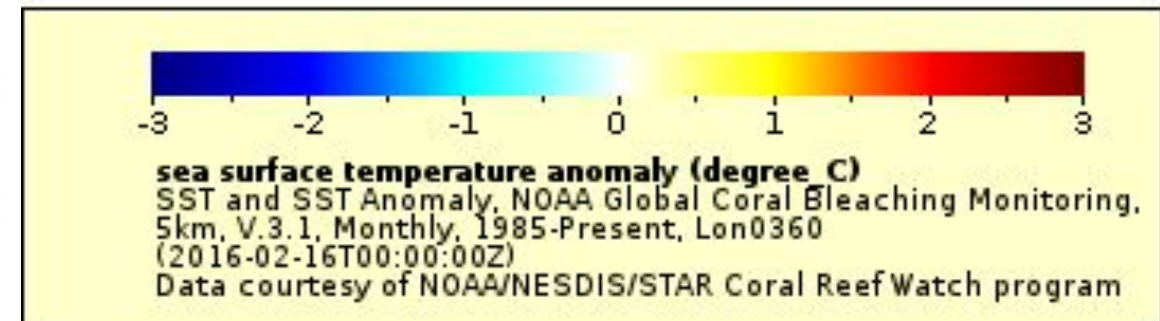
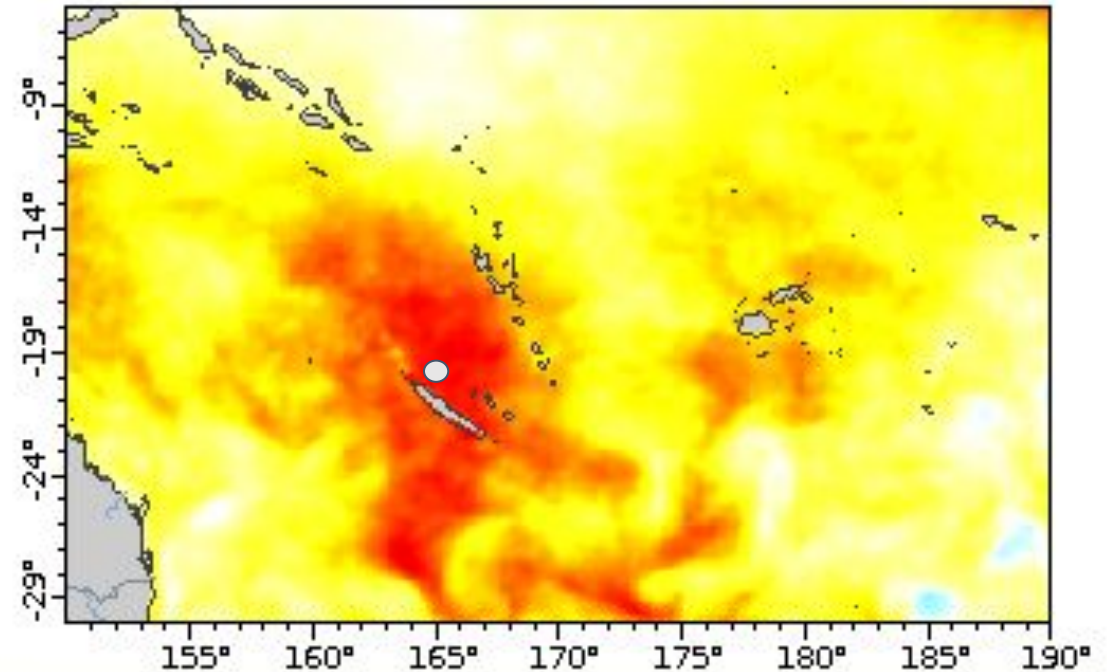
Institution: NOAA/NESDIS/STAR Coral Reef Watch program (Dataset ID: NOAA_DHW_mo
Information: [Summary](#) | [License](#) | [FGDC](#) | [ISO 19115](#) | [Metadata](#) | [Background](#) | [Data](#)

Graph Type: surface
X Axis: longitude
Y Axis: latitude
Color: sea_surface_temperature_anomaly

Dimensions Start Stop
time (UTC) specify just 1 value → 2016-02-16T00:00:00Z
latitude (degrees_north) -5.024995 -29.975
longitude (degrees_east) 150.025 190.025

Graph Settings
Color Bar: Continuity: Scale:
Minimum: Maximum: N Sections:
Draw land mask: Y Axis Minimum: Maximum: Ascending

Redraw the Graph (Please be patient. It may take a while to get the data.)



Timeseries plot- sea surface temperature (SST) anomalies near New Caledonia

ERDDAP > griddap > Make A Graph

Dataset Title: **SST and SST Anomaly, NOAA Global Coral Bleaching Monitoring Monthly, 1985-Present, Lon0360** [✉](#) [RSS](#)
Institution: NOAA/NESDIS/STAR Coral Reef Watch program (Dataset ID: NOAA_DHW_monthly_Lo
Information: [Summary](#) | [License](#) | [FGDC](#) | [ISO 19115](#) | [Metadata](#) | [Background](#) | [Data Access F](#)

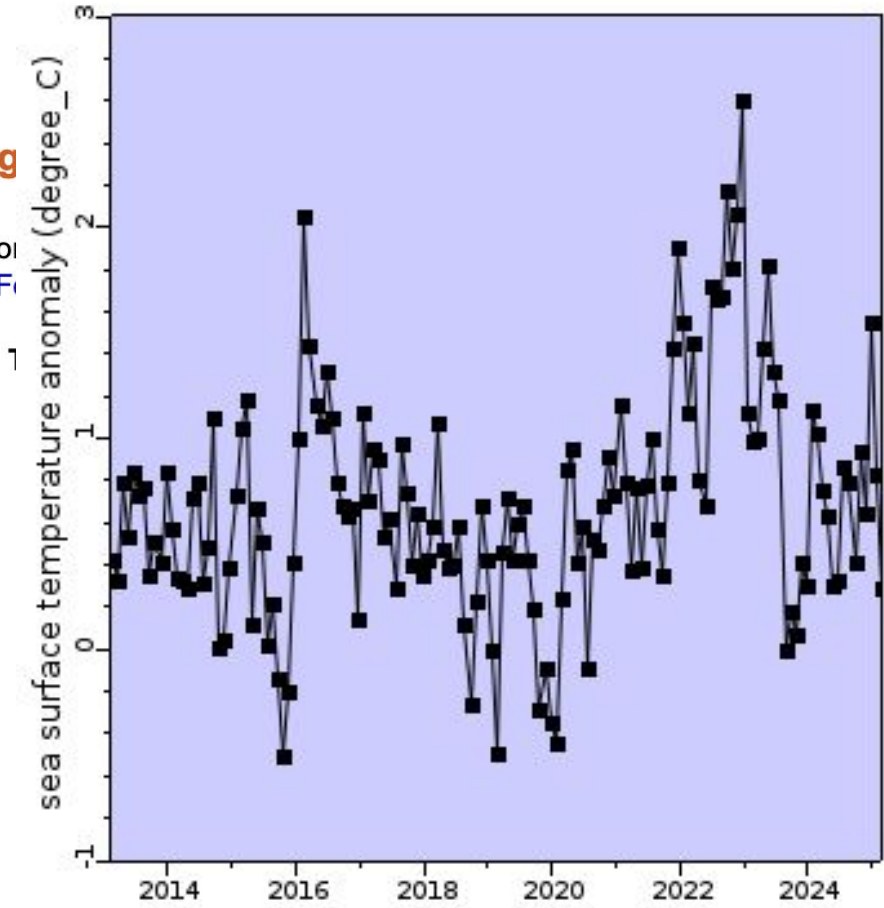
Graph Type: linesAndMarkers
X Axis: time
Y Axis: sea_surface_temperature_anomaly
Color:

Dimensions

time (UTC) Start: 2013-02-16T00:00:00Z Stop: 2025-02-16T00:00:00Z

latitude (degrees_north) specify just 1 value → -20.025

longitude (degrees_east) specify just 1 value → 165.025



—■ SST and SST Anomaly, NOAA Global Coral Bleaching Monitoring, 5km, V.3.1, Monthly, 1985-Present, Lon0360 (-20.025°N, 165.025°E)
Data courtesy of NOAA/NESDIS/STAR Coral Reef Watch program



Marine heat event in the southwest Pacific during Feb. 2016

ERDDAP > griddap > Make A Graph

https://coastwatch.pfeg.noaa.gov/erddap/griddap/NOAA_DHW_monthly_Lon0360.graph?sea_surface_temperature_anomaly

Dataset Title: **SST and SST Anomaly, NOAA Global Coral Bleaching Monitoring, Monthly, 1985-Present, Lon0360**  

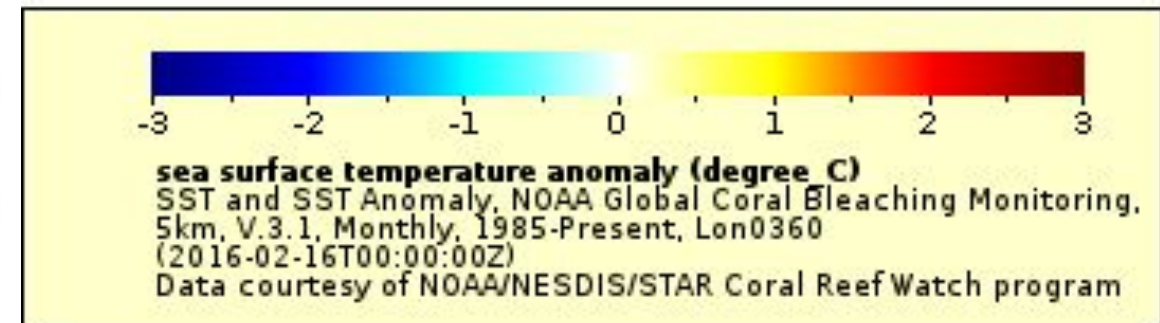
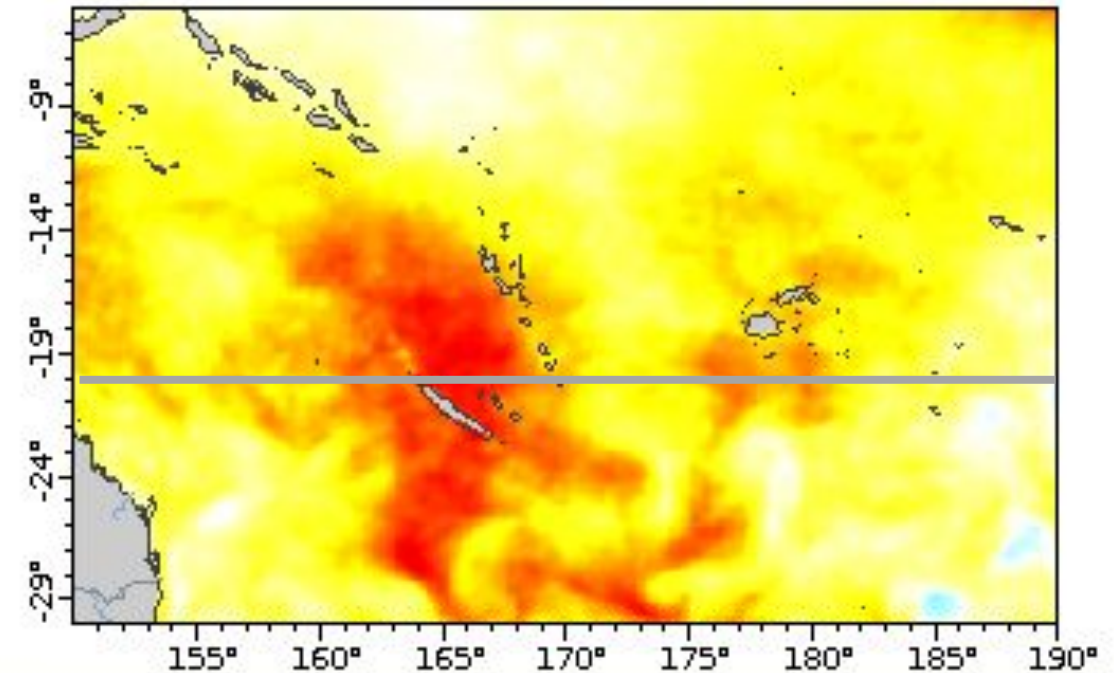
Institution: NOAA/NESDIS/STAR Coral Reef Watch program (Dataset ID: NOAA_DHW_monthly)
 Information: [Summary](#) | [License](#) | [FGDC](#) | [ISO 19115](#) | [Metadata](#) | [Background](#) | [Data](#)

Graph Type: surface
 X Axis: longitude
 Y Axis: latitude
 Color: sea_surface_temperature_anomaly

Dimensions
 time (UTC) Start Stop
 specify just 1 value → 2016-02-16T00:00:00Z
 latitude (degrees_north) -5.024995 -29.975
 longitude (degrees_east) 150.025 190.025

Graph Settings
 Color Bar: Continuity: Scale:
 Minimum: Maximum: N Sections:
 Draw land mask:
 Y Axis Minimum: Maximum: Ascending

Redraw the Graph (Please be patient. It may take a while to get the data.)



Hovmoller diagrams- time evolution of SST anomalies along 20S

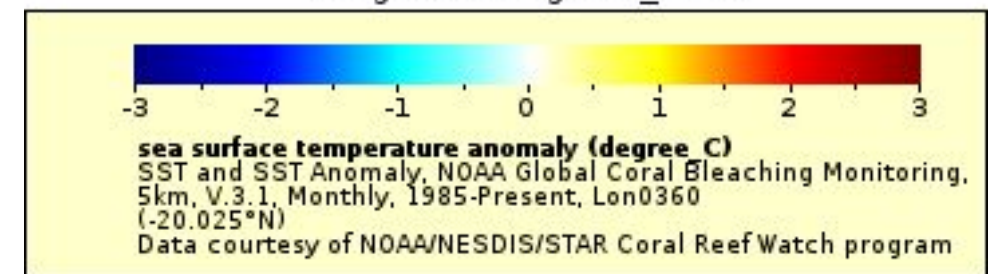
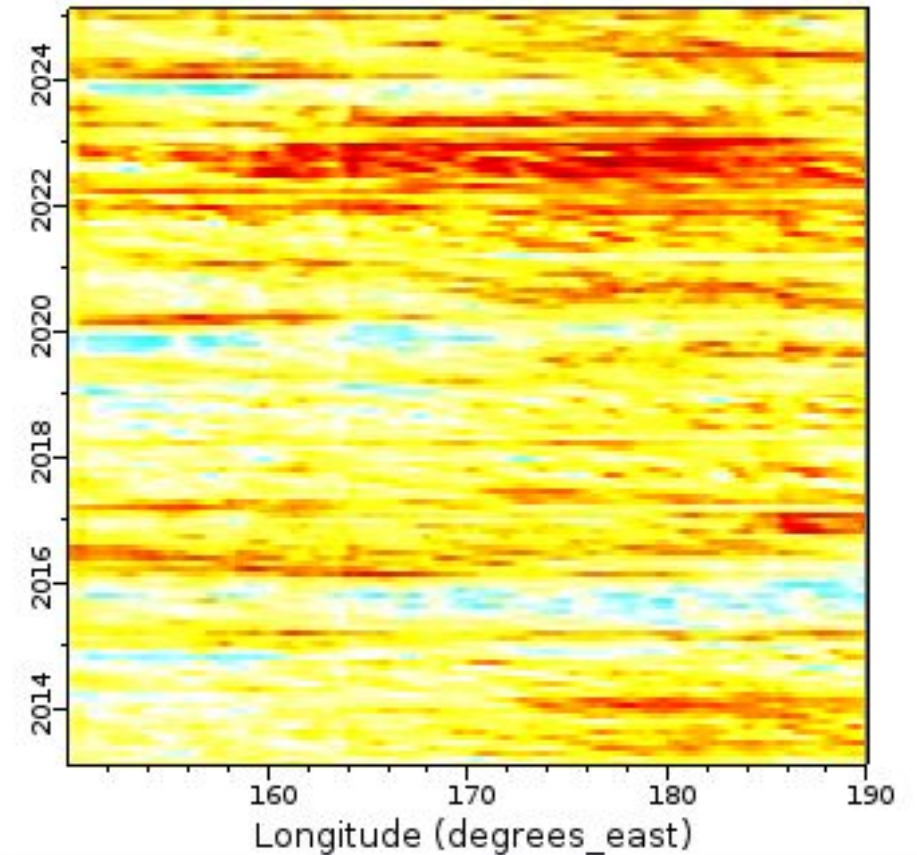
ERDDAP > griddap > Make A Graph

Dataset Title: **SST and SST Anomaly, NOAA Global Coral Bleaching Monitoring, Monthly, 1985-Present, Lon0360**  

Institution: NOAA/NESDIS/STAR Coral Reef Watch program (Dataset ID: NOAA_DHW_monthl
Information: [Summary](#) | [License](#) | [FGDC](#) | [ISO 19115](#) | [Metadata](#) | [Background](#) | [Data Access](#)

Graph Type: surface
X Axis: longitude
Y Axis: time
Color: sea_surface_temperature_anomaly

Dimensions
time (UTC) Start 2013-02-16T00:00:00Z Stop 2025-02-16T00:00:00Z
latitude (degrees_north) specify just 1 value → -20.025
longitude (degrees_east) 150.025 190.025



Mapping winds during Typhoon Mawar, May 24, 2023



ERDDAP > [griddap](#) > Make A Graph

<https://coastwatch.noaa.gov/erddap/griddap/noaacwBlendedWindsDaily.graph?windspeed>

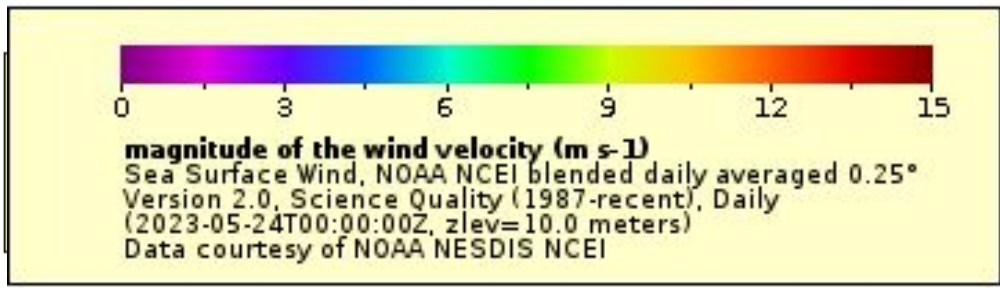
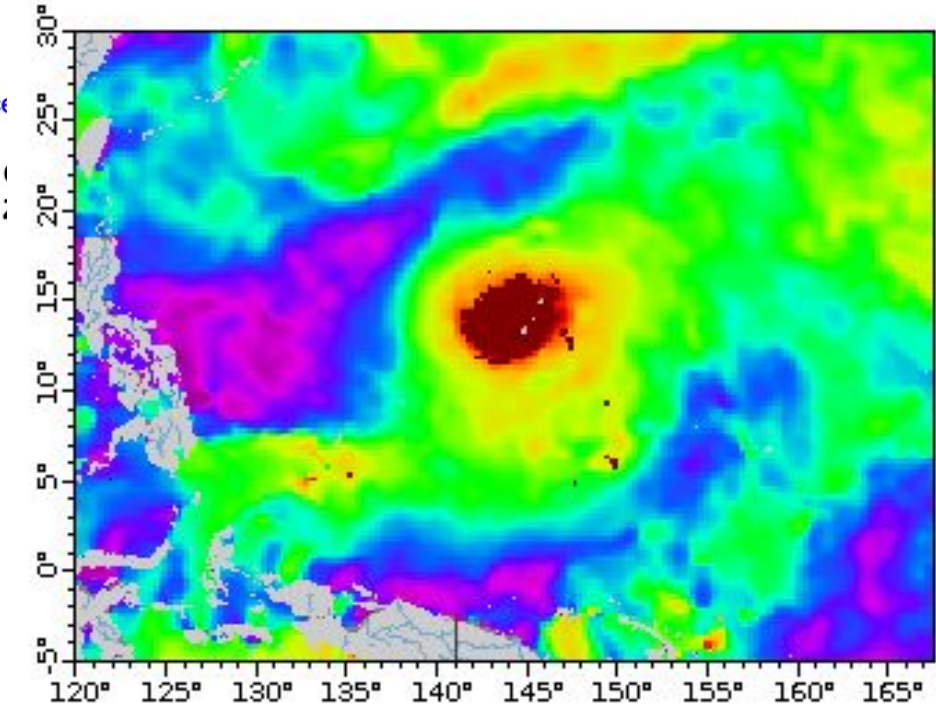
Dataset Title: **Sea Surface Wind, NOAA NCEI blended daily averaged 0.25° Version 2.0, Science Quality (1987-recent), Daily** 

Institution: NOAA NESDIS NCEI (Dataset ID: noaacwBlendedWindsDaily)
Information: [Summary](#) | [License](#) | [FGDC](#) | [ISO 19115](#) | [Metadata](#) | [Background](#) | [Data Access](#)

Graph Type:
X Axis:
Y Axis:
Color:

Dimensions **Start** **Stop**
time (UTC) specify just 1 value → 
zlev (meters) specify just 1 value →
latitude (degrees_north)  
longitude (degrees_east)  

Graph Settings
Color Bar: Continuity: Scale:
Minimum: Maximum: N Sections:
Draw land mask:
Y Axis Minimum: Maximum: Ascending



Redraw the Graph (Please be patient. It may take a while to get the data.)



Mapping winds during Typhoon Mawar, May 24, 2023

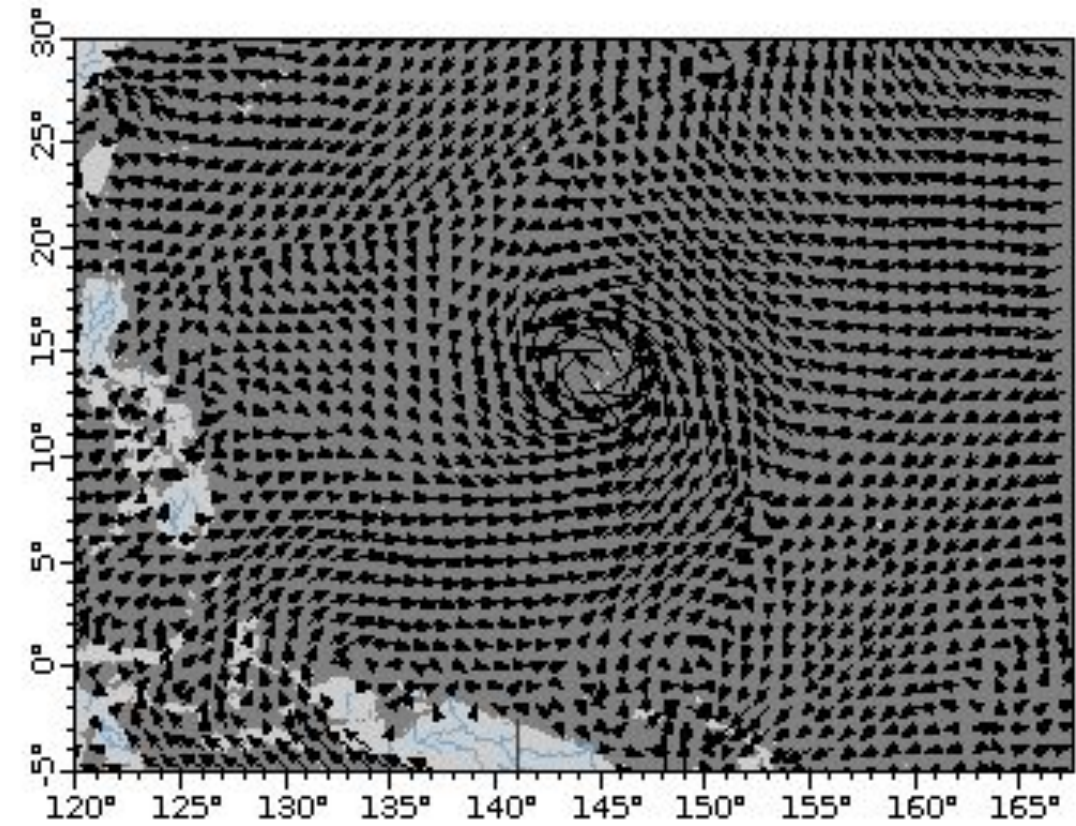
ERDDAP > griddap > Make A Graph

Dataset Title: **Sea Surface Wind, NOAA NCEI blended daily averaged 0.25 Quality (1987-recent), Daily** [RSS](#)

Institution: NOAA NESDIS NCEI (Dataset ID: noaacwBlendedWindsDaily)
Information: [Summary](#) | [License](#) | [FGDC](#) | [ISO 19115](#) | [Metadata](#) | [Background](#) | [Data Acc](#)

Graph Type: [?](#)
X Axis: [?](#)
Y Axis: [?](#)
Vector X: [?](#)
Vector Y: [?](#)


Dimensions [?](#) **Start** [?](#) **Stop** [?](#)
time (UTC) [?](#) specify just 1 value → [?](#) [◀](#) [-](#) [+](#) [▶](#)
zlev (meters) [?](#) specify just 1 value →
latitude (degrees_north) [?](#) [?](#) [◀](#) [-](#) [+](#) [▶](#) [?](#) [-](#) [+](#) [▶](#)
longitude (degrees_east) [?](#) [?](#) [◀](#) [-](#) [+](#) [▶](#) [?](#) [-](#) [+](#) [▶](#)



→ zonal wind component, meridional wind component (20.0 m s⁻¹)
Sea Surface Wind, NOAA NCEI blended daily averaged 0.25°
Version 2.0, Science Quality (1987-recent), Daily
(2023-05-24T00:00:00Z, zlev=10.0 meters)
Data courtesy of NOAA NESDIS NCEI



CoastWatch ERDDAP Tutorials and Code Gallery



NOAA CoastWatch
PolarWatch • OceanWatch

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Software Code Gallery

This gallery brings together hands-on, software-based tutorials for working with CoastWatch and ERDDAP data. Each tutorial focuses on a specific task—such as discovering datasets, building ERDDAP URLs, visualizing gridded and tabular data, or troubleshooting common workflows—using tools like Python, R, and related utilities.

Click the **info** icon to learn more about the software and tools used in the tutorial, **eye** icon to preview outputs, **box** to view tutorial resources, or **download** to open the source file on GitHub.

Title	Info	Preview	Resources	Download ↓
ERDDAP Basics - Using the ERDDAP data catalog			—	
ERDDAP Basics - Visualize and download data			—	
ERDDAP Basics - Understanding the ERDDAP URL			—	
ERDDAP Basics - Creating a Hovmoller plot			—	
ERDDAP Basics - Work with wind vectors			—	
ERDDAP Basics - Using tabular data			—	
ERDDAP Basics - Additional Resources			—	

- Work with tabular data on ERDDAP
- Deconstructing an ERDDAP data request URL
- Using ERDDAP in R

<https://coastwatch-training.github.io/tutorials/software.html>



List of NOAA CoastWatch ERDDAP sites

CoastWatch Central Pacific Node

<https://oceanwatch.pifsc.noaa.gov/erddap/>

CoastWatch Central <https://coastwatch.noaa.gov/erddap/>

CoastWatch West Coast Node <https://coastwatch.pfeg.noaa.gov/erddap/>

CoastWatch PolarWatch Node <https://polarwatch.noaa.gov/erddap/>

CoastWatch Gulf of Mexico Node <https://cwcgom.aoml.noaa.gov/erddap/>

CoastWatch Great Lakes Node <https://coastwatch.glerl.noaa.gov/erddap/>



Start Using ERDDAP:

Search for Interesting Datasets

- Do a Full Text Search for Datasets

- [View a List of All 847 Datasets](#)

Which ERDDAP should I use?

If you are unsure of which ERDDAP hosts the dataset you are interested in, you can use these two unofficial ways to search multiple ERDDAPs for datasets:

<http://erddap.com/> (not working);

<https://erddap.github.io/SearchMultipleERDDAPs.html>



Search Multiple ERDDAPs

Do a full text search for datasets:

Or, do an advanced search:

