



Introduction to CoastWatch

Dale Robinson

Operations Manager, West Coast Node

NOAA Satellite Workshop

Juneau, AK

Mar 5 – Mar 7, 2019

Versioning

- Robinson, 2017
- Tomlinson and Vogel, 2018
- Abecassis and Howell, 2018
- Robinson, 2019



CoastWatch is a national program funded by NESDIS¹

MISSION: PROVIDE ACCESS TO AND PROMOTE THE USE OF OCEAN SATELLITE DATA PRODUCTS

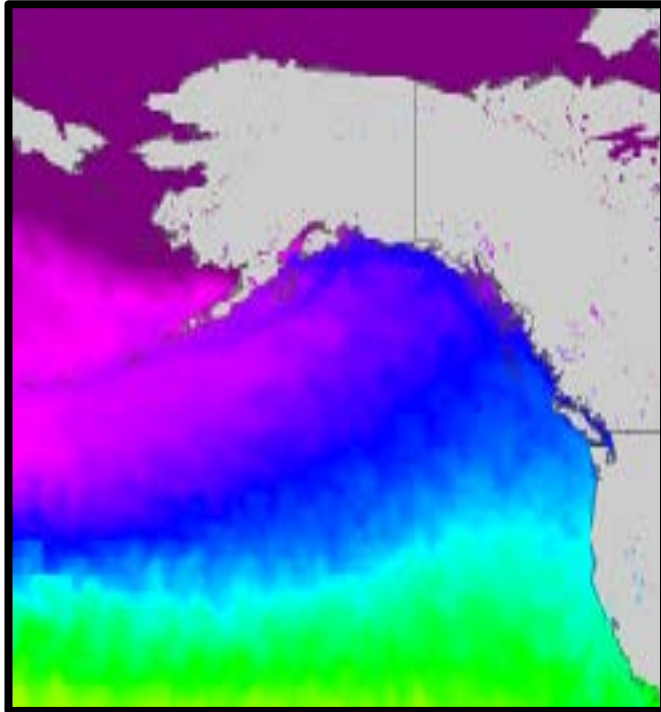


¹National Environmental Satellite, Data, and Information Service



West Coast Node (WCN)

The service area is the West Coast, from California to Alaska



WCN region is from Alaska to California

Cara Wilson¹
Node Manager

Dale Robinson^{1,2}
Operations Manager

One stop shopping for data products
from many sources

Extensive data holdings
in the Eastern Pacific and Globally

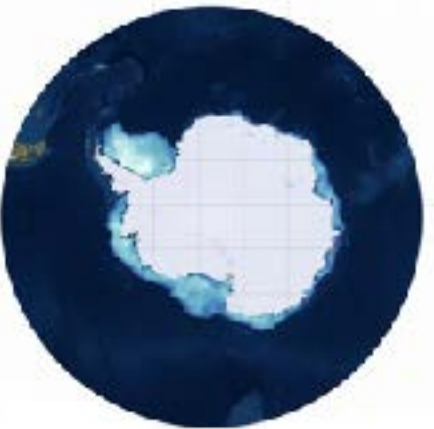
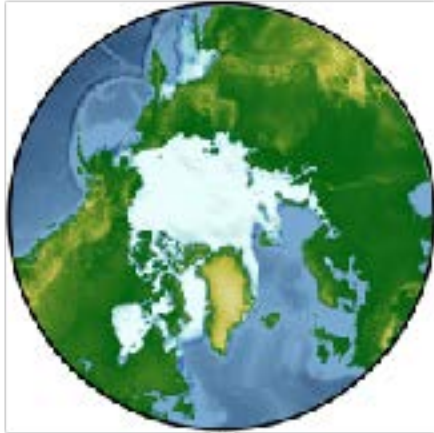
¹NOAA Southwest Fisheries - Environmental Research Division

²UC Santa Cruz- Cooperative Institute for Marine Ecosystems and Climate (CI-MEC)



PolarWatch

The service areas are polar and subpolar waters



Jennifer Sevadjan^{1,2}
Operations Manager

Cara Wilson¹
Node Manager

Dale Robinson^{1,2}
Deputy Node Manager

One stop shopping for data products
from many sources

Data holdings in the Arctic, Antarctic and globally

Products of interest for polar regions, e.g. sea ice

¹NOAA Southwest Fisheries - Environmental Research Division

²UC Santa Cruz- Cooperative Institute for Marine Ecosystems and Climate (CI-MEC)



West Coast Node and PolarWatch are embedded in Southwest Fisheries Science Center locations



Cara Wilson

Environmental Research Division (ERD)
Monterey, California

Jennifer Sevadjian
ERD (SWFSC HQ)
La Jolla, California



Dale Robinson

Environmental Research Division (ERD)
Santa Cruz, California



CoastWatch shares expertise among nodes

KNOWLEDGE, CAPABILITIES, AND RESOURCES OF THE NETWORK ARE AVAILABLE TO YOU



Contact information for the nodes and central office

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PolarWatch

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Node Manager

Cara Wilson

Node Manager

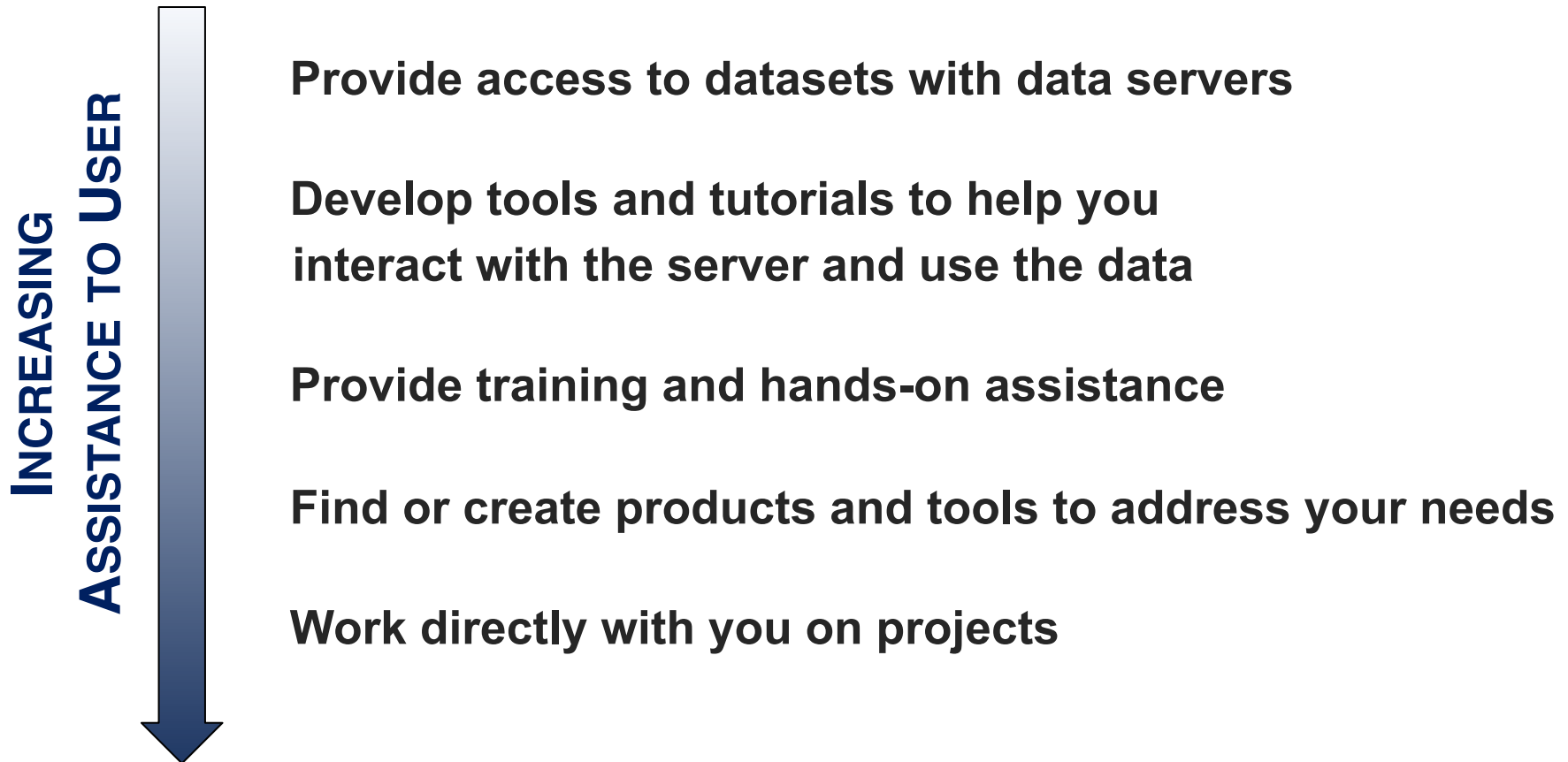
Dale Robinson

Website

polarwatch.noaa.gov

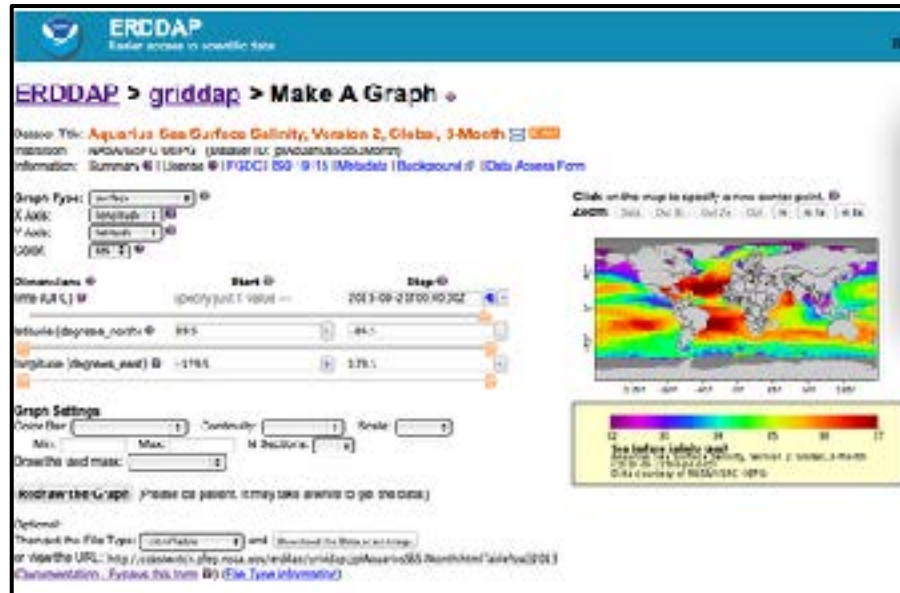


We offer several levels of service to help you use satellite data



Data server

Our server has a catalog of over 1,000 satellite datasets

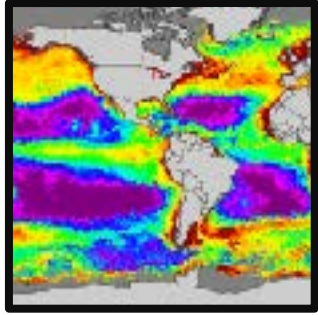


Distributed via our ERDDAP Server
Over ½ million data requests per day

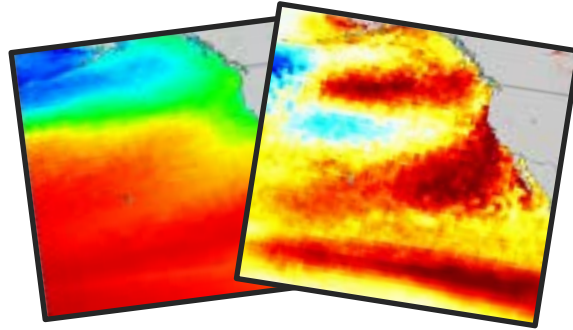
WE WILL GO OVER THE USE OF ERDDAP DURING THE COURSE



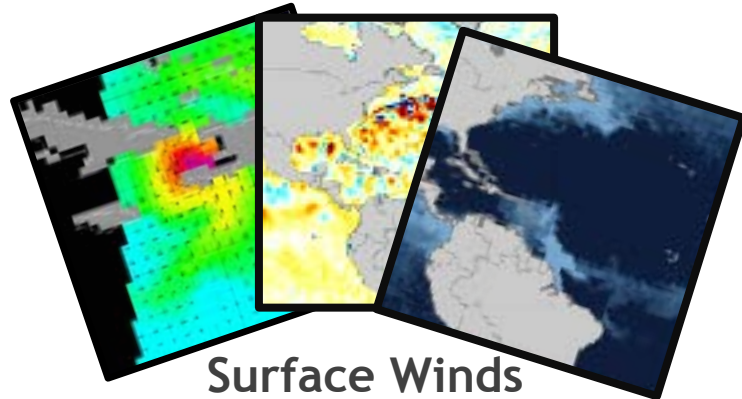
The catalog contains satellite datasets with a regular gridded (aka L3 and L4)



Chlorophyll
Primary Productivity



SST
SST Anomaly



Surface Winds
Sea Surface Salinity
Sea Surface Height and Anomaly

Daily, weekly, and monthly composites
Blended products
Interpolated products (gap free)



Our data catalog contain over 400 non-satellite data products

In Situ Measurements

- Animal Telemetry Network
- NDBC buoys
- ARGO floats
- BioArgo floats
- Arctic International Buoy Program (soon)
- Glider Data

Field Sampling

- CalCOFI
- California Fish Landings
- SWFSC Rockfish

Underway Data

- NOAA Vessels
- UNOLS Vessels

Models, Climatologies

- OSCAR Sea Surface Velocity
- SODA Model
- NOAA Coastal Relief Model
- NOAA Seafloor Topography
- USGS Topography
- NOAA RTOFS Models
- NOAA World Ocean Atlas
- NASA/NOAA CCMP Wind Atlas
- SWFSC Upwelling Index
- Navy HYCOM Model

AND MANY MORE...



Tools and tutorials

For help accessing and using data

Scripts and code snippets in R, Python, Matlab

R and Matlab modules that do common tasks

Tutorials to complement the scripts and modules

Plug-in for getting online satellite data into ArcGIS

CARA WILL HAVE TRAINING SESSIONS ON R MODULES AND ARC PLUG-IN WEDNESDAY



Training

You are attending WCN's 14th annual NOAA Satellite Course



WCN's has held an annual NOAA Satellite Course since 2006

Starting in 2018, the course is offered by other CoastWatch Node (e.g. East Coast, Central Pacific)

We have limited funding to do in-person, one-on-one or group training at NOAA line offices.

- This course is the result of a site visit to Juneau in 2018.



WCN can help you access specialty products

SENTINEL 2 COLOR DATA



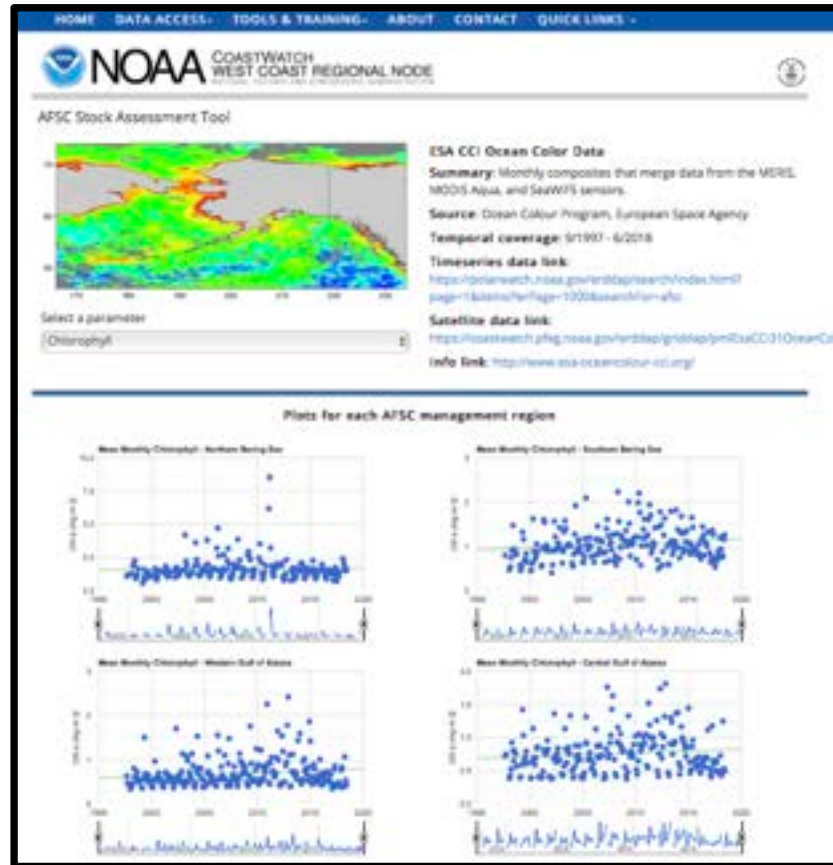
10 m resolution

Specialty products like synthetic aperture radar winds, Sentinel 2, and Landsat data

Swath data (aka irregular grid or L2 data)



We can partner with you to create new products or tools



WCN is working with Kalei Shotwell to develop a data tool for helping with stock assessment reports



Contact us and visit the websites!

Questions?



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