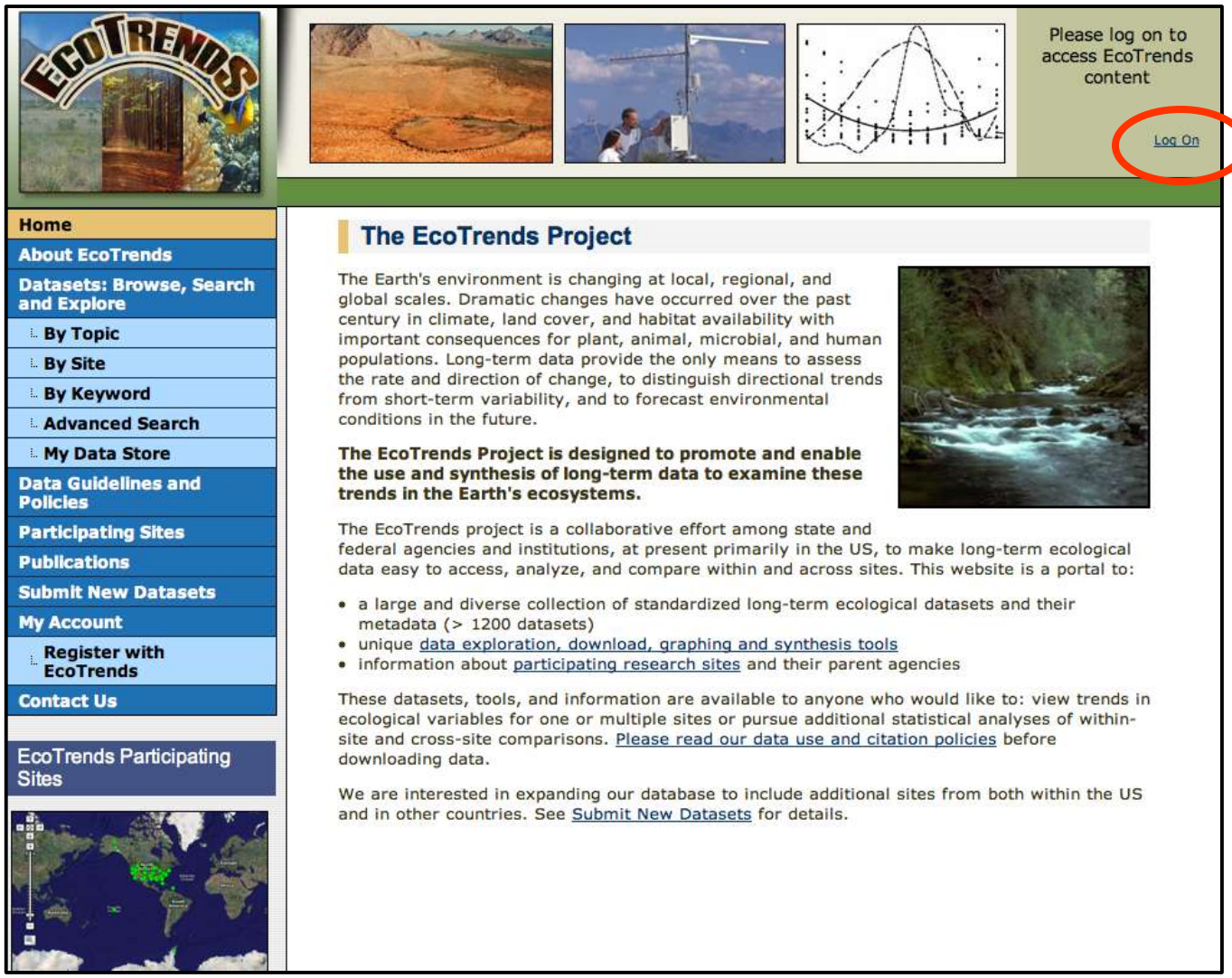
The EcoTrends Web Portal: An Opportunity for Data Discovery and Exploration by Teachers and Students

Christine Laney
EcoTrends Project Coordinator
Jornada Basin LTER, New Mexico State University
chrlaney@nmsu.edu

EcoTrends Project Overview

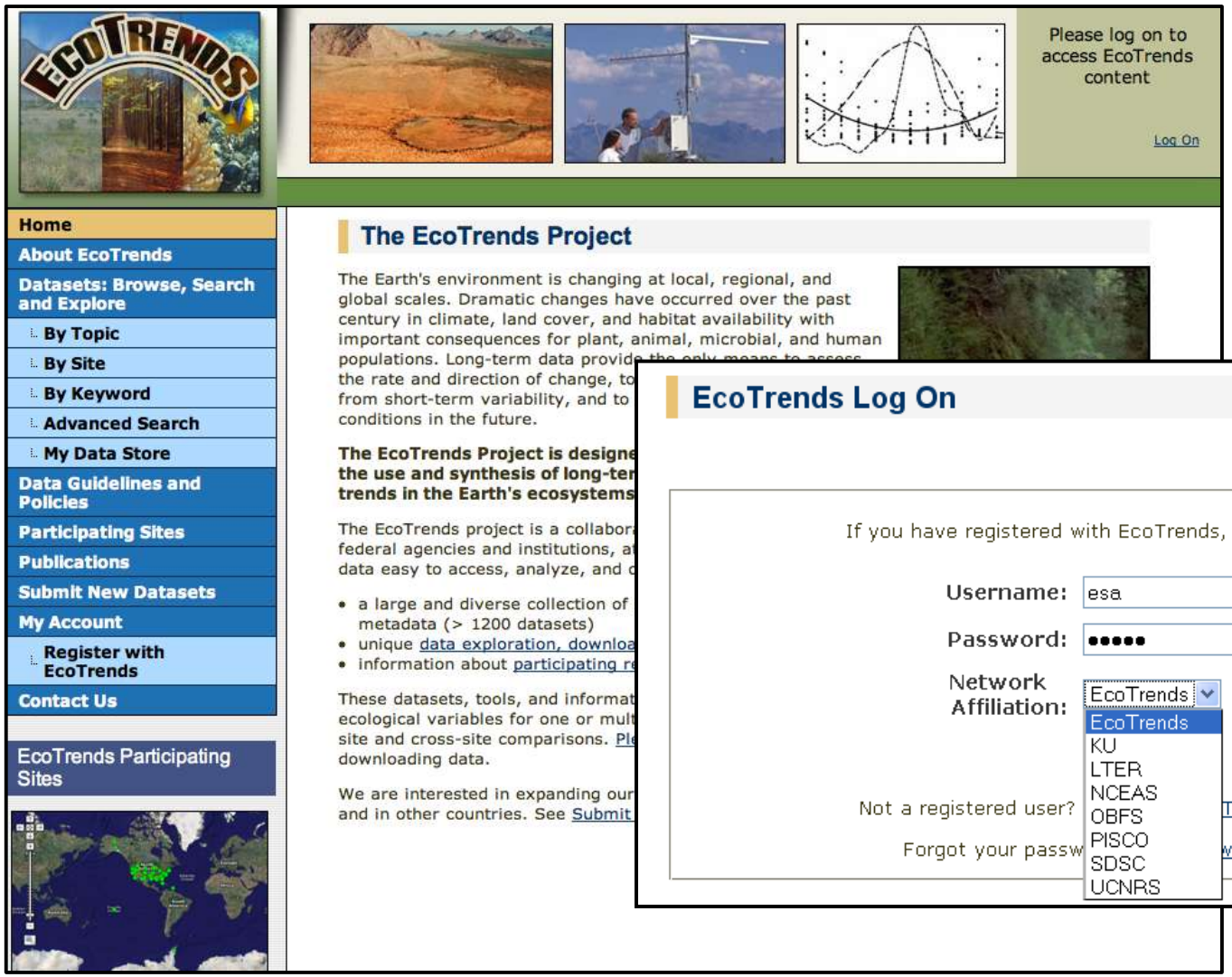
- Goals
  - Promote and enable “long-term” ecological time-series data for use in synthesis projects (book and website)
    - Use raw data from the sites to create derived datasets that are in the same format, on the same time scales
  - Simplify Discovery, Exploration, and Access to “derived” data products (website)
- Timeline
  - Project conception – 2004
  - Book/web portal release – Fall 2008 [Note that datasets currently on the website are in the reviewing process]
- Data Partners: U.S. LTER, USDA (ARS/FS), USGS, DOE, and Univ. Arizona (50 sites total, 23,817 unique data sets)

http://www.ecotrends.info/



Learning about ecosystems is a process that requires data to be collected across space and over time

http://www.ecotrends.info/

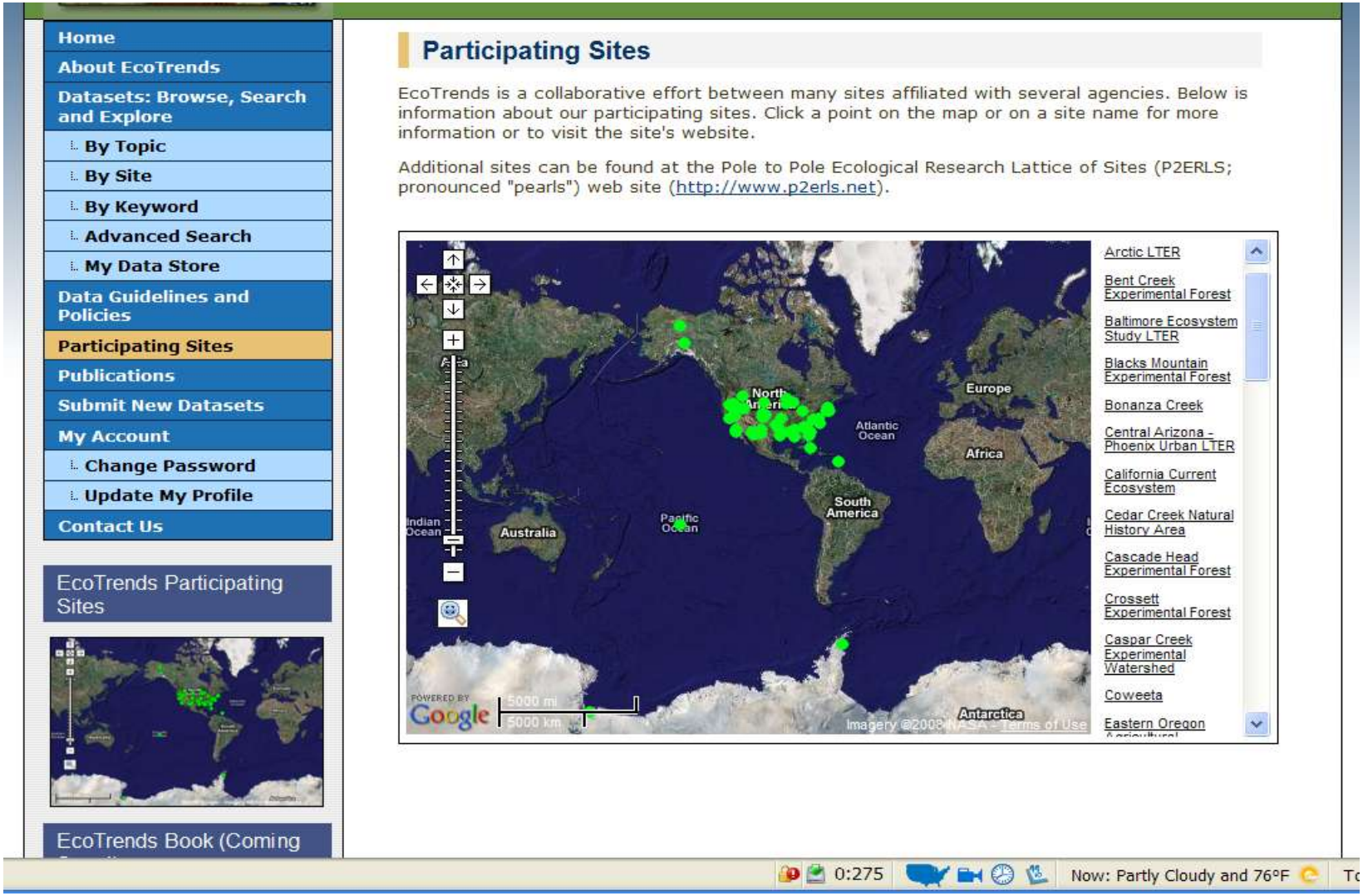


To login, use your EcoTrends Network Affiliate Login, or register a new account.

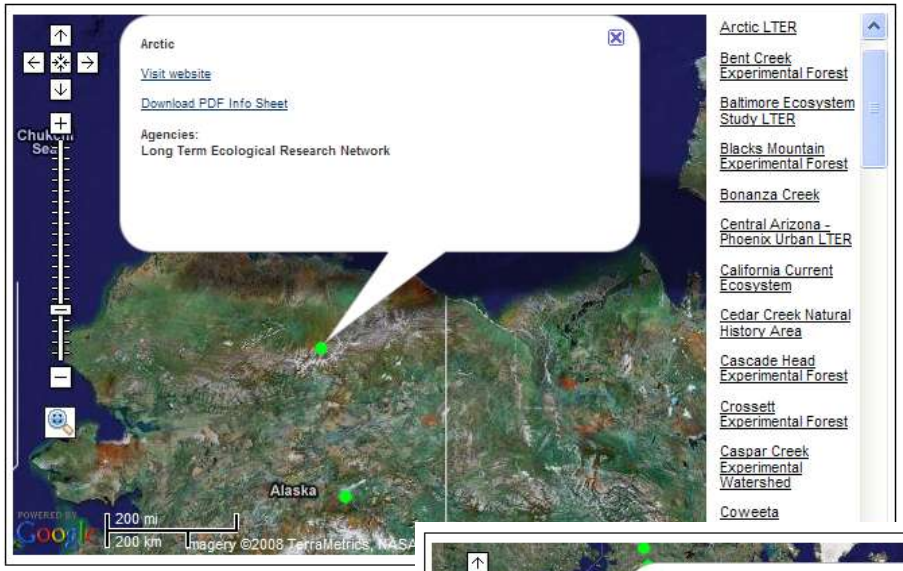
Use Case Scenario

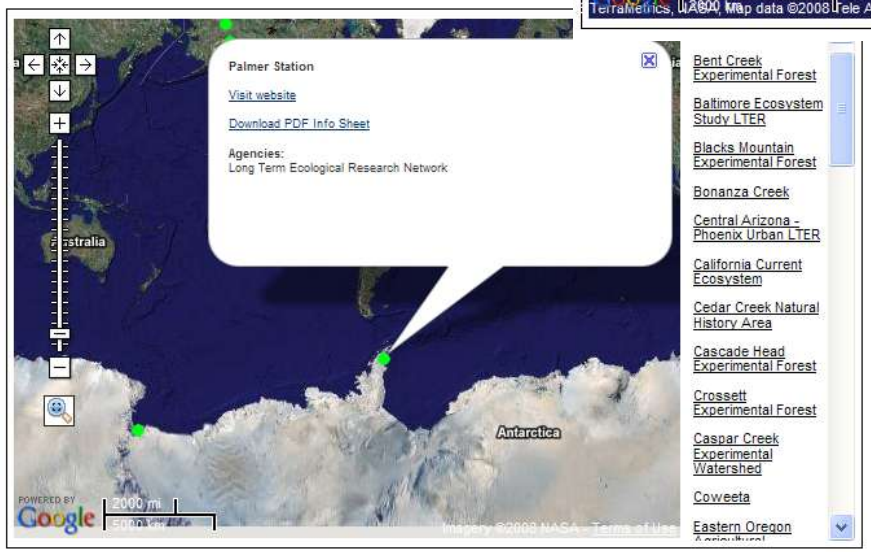
- Global Climate Change – Global Warming
- Hypotheses
  - Sea level rise due to melting ice caps
  - Melting ice caps due to increasing air temperature
- Find relevant data
  - Search for sea level data on US East and West coasts
  - Search for temperature data at Arctic and Antarctic
  - Verify data is of interest (“exploratory”)
- Compare data in single plot
- Download data

Where are data available?



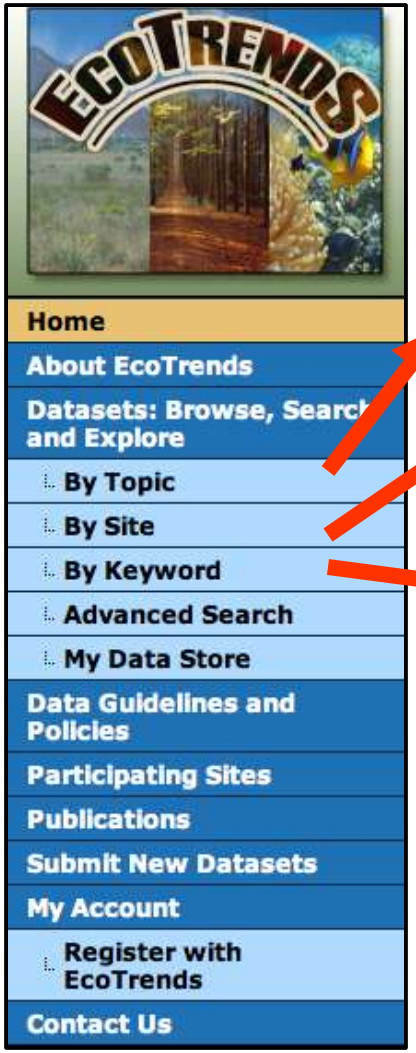
What is the context of the data that were collected at the sites?

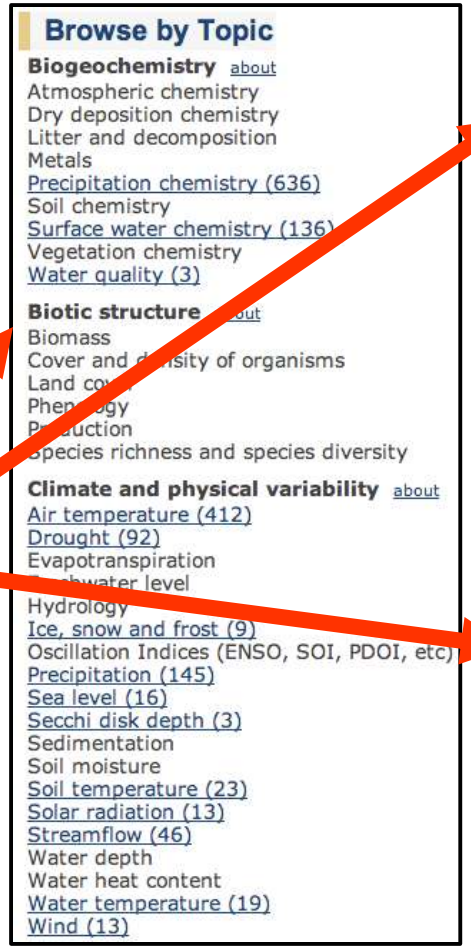


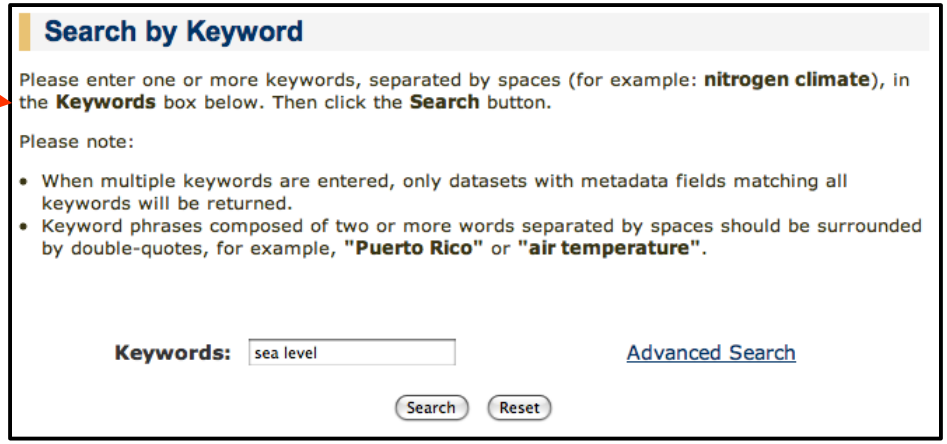


Let's look at Palmer Station and Arctic LTER for temperature data; Baltimore Ecosystem Study LTER and California Current Ecosystem LTER for sea level data.

Data Discovery

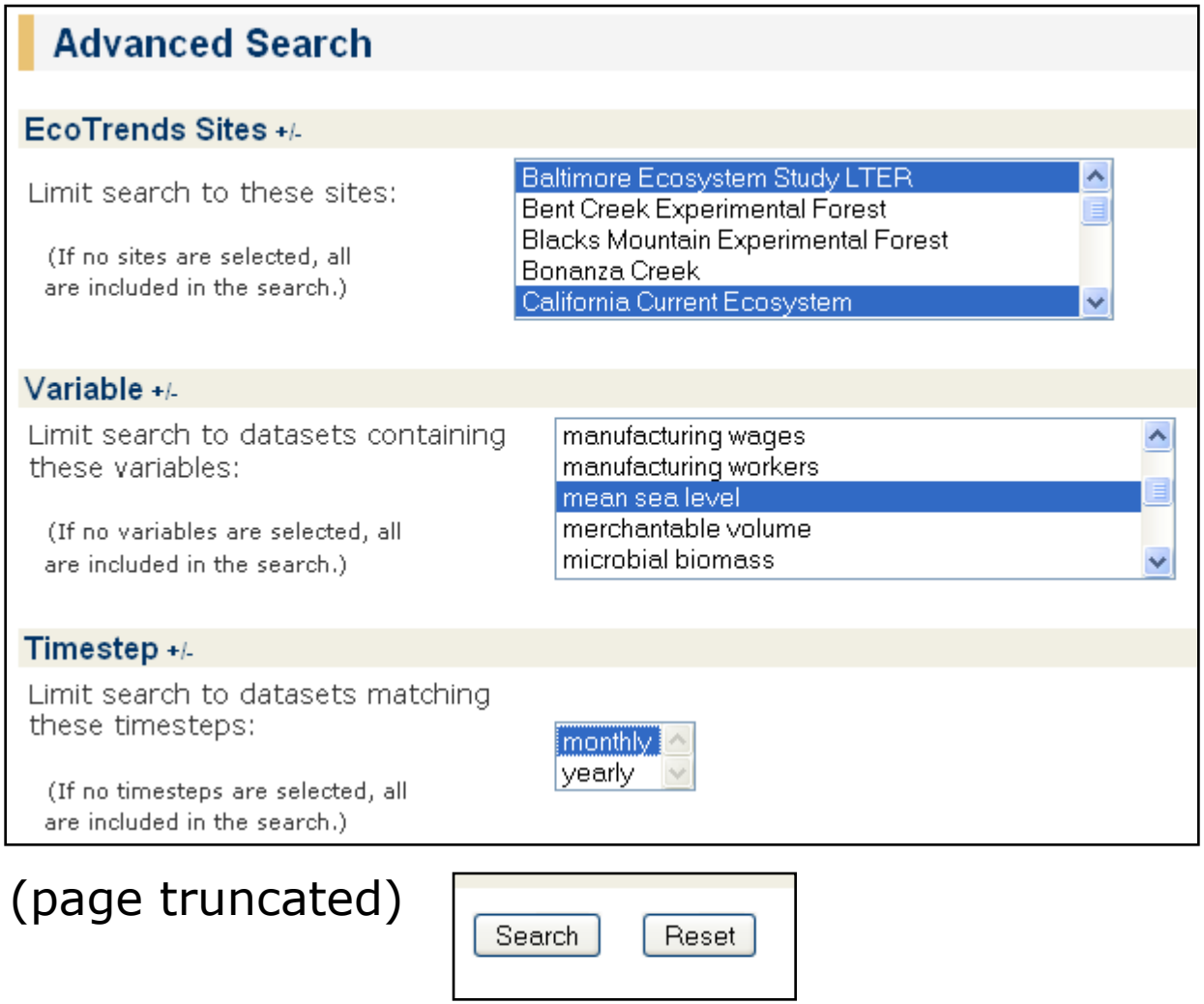






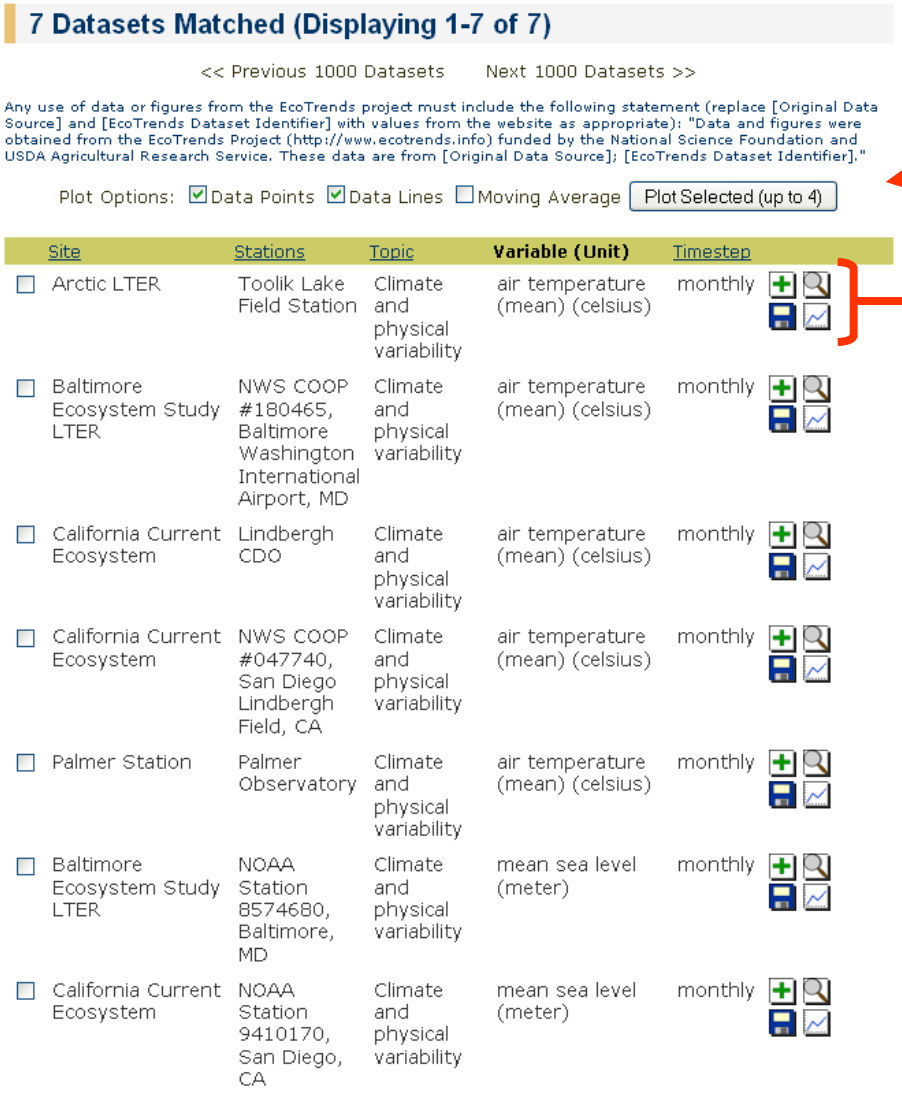
Will be able to start looking at biotic responses to abiotic drivers!

Data Discovery



(page truncated)

Search Results



7 Datasets Matched (Displaying 1-7 of 7)

<< Previous 1000 Datasets Next 1000 Datasets >>

Any use of data or figures from the EcoTrends project must include the following statement (replace [Original Data Source] and [EcoTrends Dataset Identifier] with values from the website as appropriate): "Data and figures were obtained from the EcoTrends Project (http://www.ecotrends.info) funded by the National Science Foundation and USDA Agricultural Research Service. These data are from [Original Data Source]; [EcoTrends Dataset Identifier]."

Plot Options: ☑ Data Points ☑ Data Lines ☐ Moving Average Plot Selected (up to 4)

Site	Stations	Topic	Variable (Unit)	Timestep
Arctic LTER	Toolik Lake Field Station	Climate and physical variability	air temperature (mean) (celsius)	monthly
Baltimore Ecosystem Study LTER	NWS COOP #180465, Baltimore Washington International Airport, MD	Climate and physical variability	air temperature (mean) (celsius)	monthly
California Current Ecosystem	Lindbergh CDO	Climate and physical variability	air temperature (mean) (celsius)	monthly
California Current Ecosystem	NWS COOP #047740, San Diego Lindbergh Field, CA	Climate and physical variability	air temperature (mean) (celsius)	monthly
Palmer Station	Palmer Observatory	Climate and physical variability	air temperature (mean) (celsius)	monthly
Baltimore Ecosystem Study LTER	NOAA Station 8574680, Baltimore, MD	Climate and physical variability	mean sea level (meter)	monthly
California Current Ecosystem	NOAA Station 9410170, San Diego, CA	Climate and physical variability	mean sea level (meter)	monthly

Add to data store

Get more information (metadata)

Download data (save to disk)

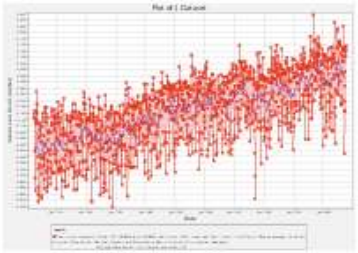
Plot (use above settings)

BES LTER Sea-level Metadata

EcoTrends Dataset Identifier: ecotrends.17703.1

Original Data Source:	National Oceanic and Atmospheric Administration		
Site:	Baltimore Ecosystem Study LTER	**Stations:**	NOAA Station 8574680, Baltimore, MD
Revision:	1 of 1	**Date Range:**	1902-07-01 to 2007-09-30
Other Revisions:		**Timescale:**	monthly
View:	Data (as HTML) Metadata-EML (as HTML)	**Variable:**	mean sea level
Download:	Data (as CSV) Metadata-EML (as XML)	**Unit:**	meter

Plot:



(Click to view plot)

Plot Options:
- ☑ Data Points
- ☑ Data Lines
- ☑ Moving Average

Add to My Data Store help Back to Datasets Matched