CTD files (netcdf format originally) from NOAA/PMEL FOCI cruises from multiple cruises in coastal Gulf of Alaska, Northeast Pacific, CGOA, SE Bering Sea from 2001-2004 (NEP project)

Website: https://www.bco-dmo.org/dataset/3032

Version: 2007-10-03

Project

» U.S. GLOBEC Northeast Pacific (NEP)

Program

» U.S. GLOBal ocean ECosystems dynamics (U.S. GLOBEC)

| Contributors | Affiliation | Role |
|------------------|---|---------------------------|
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Dataset Description

CTD data collected by NOAA/PMEL/EcoFOCI:
Northeast Pacific - Coastal Gulf of Alaska
Ecosystems & Fisheries Oceanography Coordinated Investigations (NOAA/PMEL/EcoFOCI)

Project Principal Investigators for CTD data:

Phyllis Stabeno and Nancy Kachel Nutrient data analysis: Calvin Mordy

Methods & Sampling

CTD data are from process cruises conducted as part of GLOBEC 2001-2004 in the Coastal Gulf of Alaska

Data Processing Description

BCO-DMO changed parameter names from original PMEL codes. Use the table below to interpret weather and sea-state codes.

| Code | EcoFOCI e Sea State (ft.) | data: Weather Visibility (NM) | | e Codes Weather | Code |
|------|------------------------------|----------------------------------|---------------|-----------------------|------|
| 0 | 0.0 ft - glassy | <00.02 | cirrus | clear | 0 |
| 1 | 0.0-0.3 ft - rippled | 00.02-00.10 | cirrocumulus | partly cloudy | 1 |
| 2 | 0.3-1.6 ft - wavelet | 00.10-00.25 | cirrostratus | continuous clouds | 2 |
| 3 | 1.6-4.1 ft - slight | 00.25-00.50 | altocumulus | blowing snow | 3 |
| 4 | 4.1-8.2 ft - moderate | 00.50-01.00 | altostratus | fog, thick dust, haze | 4 |
| 5 | 8.2-13.1 ft - rough | 01.00-02.00 | nimbostratus | drizzle | 5 |
| 6 | 13.1-19.7 ft - very rough | 02.00-05.00 | stratocumulus | rain | 6 |
| 7 | 19.7-29.5 ft - high | 05.00-10.00 | stratus | snow or rain/snow mix | 7 |
| 8 | 29.5-45.9 ft - very high | 10.00-25.00 | cumulus | showers | 8 |
| 9 | >45.9 ft - phenomenal | >25.00 | cumulonimbus | thunderstorms | 9 |

Parameters

| Parameter | Description | Units |
|---------------|---|--------------------|
| lat | Latitude, negative = South. | decimal degrees |
| cruiseid | Identifier of the cruise (e.g. $hx284 = R/V$ Alpha Helix cruise number 284). | N/A |
| year | Year of the cruise in YYYY format. | N/A |
| cast | Cast number. | N/A |
| lon | Longitude, negative = West. | decimal degrees |
| julian_day | Days since an arbitrary beginning. Used by PMEL's netCDF format. | N/A |
| msec_since_00 | Milliseconds since midnight. | milliseconds |
| depth_w | Depth of water at cast. | meters |
| station | Station name. | N/A |
| water_mass | Water mass code: B = Bering, S = Shelikof, G = Gulf of Alaska. | N/A |
| weather | Weather conditions code. 0-9 (0=clear); see table above under 'Processing Description'. | N/A |

| sea_state | Sea state code; 0-9 (0=glassy), see table above under 'Processing Description'. | n/a |
|--------------|--|--------------------|
| press_bar | Atmospheric pressure as measured by barometer. | millibars |
| wind_dir | Direction from which the wind blows. | degrees True |
| wind_speed | Wind speed. | knots |
| visibility | Visibility; code 0-9 (0= 25 nm) see table above under 'Processing Description;. | N/A |
| cloud_type | Cloud type, code 0-9; See table above under 'Processing Description'. | N/A |
| cloud_amount | Cloud cover amount, code 0-9; (0=clear, 9=maximum cover). | N/A |
| temp_air | Dry air temperature. | degrees Celsius |
| depth | Depth at which the measurement was taken. | meters |
| temp | Temperature. PMEL name = T_28. | degrees Celsius |
| temp2 | Secondary Temperature; PMEL name = T2_35. | degrees Celsius |
| PAR | Photosynthetically active radiation. PMEL name = PAR_905. | uEin m-2 s-1 |
| flvolt | Raw fluorometer reading in volts; from CTD. PMEL name = rFV_971. | volts |
| trans | Transmissometry from CTD. Measured as a percentage. PMEL name = Tr_904. | % |
| O2_umol_kg | Dissolved oxygen calculated from CTD values. PMEL name = O_65. | umol/kg |
| sigma_t | Simga-t (kg/m^3). PMEL name = ST_70. | kg m-3 |
| par_v | Photosynthetically Active Radiation in volts (instrument units). PMEL name = PAR_916. | volts |
| flvolt2 | Voltage of Wetlabs wetstar fluorometer. PMEL name = VWS_975. | volts |
| flvolt3 | Voltage of SeaPoint fluorometer. PMEL name = VSP_976. | volts |
| sal | Salinity in practical salinity units (PSU). PMEL name = S_41. | PSU |
| sal2 | Additional measurement of salinity in practical salinity units (PSU). PMEL name $= S_42$. | PSU |
| dynh_0 | Dynamic meters. PMEL name = DYN_10. | meters |
| fluor | Sea Point fluorometer chlorophyll. PMEL name = fSP_974. | ug/L |
| fluor2 | Wetlabs wetstar fluorometer chlorophyll. PMEL name = fWS_973. | ug/L |
| pressure | Alternate measure of depth used in some cruises. | meters |

Instruments

| Dataset- specific Instrument Name | Anemometer |
|--|--|
| Generic Instrument Name | Anemometer |
| | An anemometer is a device for measuring the velocity or the pressure of the wind. It is commonly used to measure wind speed. Aboard research vessels, it is often mounted with other meteorological instruments and sensors. |

| Dataset-specific Instrument Name | Barometer |
|-------------------------------------|---|
| Generic Instrument Name | Barometer |
| | A barometer is an instrument used to measure atmospheric pressure. There are many types of barometers identified by make and model and method of measurement. |

| Dataset- specific Instrument Name | Conductivity, Temperature, Depth |
|--|---|
| Generic Instrument Name | CTD - profiler |
| | The Conductivity, Temperature, Depth (CTD) unit is an integrated instrument package designed to measure the conductivity, temperature, and pressure (depth) of the water column. The instrument is lowered via cable through the water column. It permits scientists to observe the physical properties in real-time via a conducting cable, which is typically connected to a CTD to a deck unit and computer on a ship. The CTD is often configured with additional optional sensors including fluorometers, transmissometers and/or radiometers. It is often combined with a Rosette of water sampling bottles (e.g. Niskin, GO-FLO) for collecting discrete water samples during the cast. This term applies to profiling CTDs. For fixed CTDs, see https://www.bco-dmo.org/instrument/869934 . |

| Dataset- specific Instrument Name | Meteorological Station |
|--|--|
| Generic Instrument Name | Meteorological Station |
| | MET station systems are designed to record meteorological information on board ships or mounted on moorings. These are commonly referred to as EMET (Electronic Meteorological Packages) or IMET (Improved Meteorological Packages) systems. These sensor packages record measurements of sea surface temperature and salinity, air temperature, wind speed and direction, barometric pressure, solar and long-wave radiation, humidity and precipitation. |

Deployments

MF0105

| Website | https://www.bco-dmo.org/deployment/57968 | |
|------------|---|--|
| Platform | R/V Miller Freeman | |
| Report | http://globec.whoi.edu/nep/reports/psullivan/mf0105_rpt.pdf | |
| Start Date | 2001-04-28 | |
| End Date | 2001-05-08 | |

MF0111

| Website | https://www.bco-dmo.org/deployment/57554 | |
|------------|---|--|
| Platform | R/V Miller Freeman | |
| Report | http://globec.whoi.edu/nep/reports/psullivan/mf0111.pdf | |
| Start Date | 2001-09-21 | |
| End Date | 2001-09-29 | |

RB0103a

| Website | https://www.bco-dmo.org/deployment/57969 |
|-------------|---|
| Platform | NOAA Ship Ronald H. Brown |
| Report | http://globec.whoi.edu/nep/reports/psullivan/rb0103_leg1_rpt.pdf |
| Start Date | 2001-05-06 |
| End Date | 2001-05-13 |
| Description | Leg 1 Dutch Harbor, AK to Seward, AK This cruise was divided into three legs: RB0103a - Leg 1 FOCI deployment report - 06 May 2001 to 13 May 2001 RB0103b - Leg 2 FOCI deployment report - 13 May 2001 to 23 May 2001 RB0103L3 - Leg 3 FOCI deployment report - 25 May 2001 to 08 June 2001 |

KM0309B

| Website | https://www.bco-dmo.org/deployment/57552 |
|-------------|---|
| Platform | R/V Kilo Moana |
| Report | http://globec.whoi.edu/nep/reports/cgoa_cruises/KM0305_FCI.pdf |
| Start Date | 2003-04-18 |
| End Date | 2003-05-18 |
| Description | There were two legs to this cruise:Leg 1 Report (known by cruise ID KM0305) - 18 April 2003 to 27 April 2003Leg 2 Report (known by cruise ID KM0309B) - 29 April 2003 to 18 May 2003 Cruise information and original data are available from the NSF R2R data catalog. Methods & Sampling Note: CTD data are provided for both legs of cruise KM0309 (dates 18 April 2003 to 18 May 2003). The first and second legs are also known as KM0305 and KM0309B, respectively. |

KM0313

| Website | https://www.bco-dmo.org/deployment/57553 | |
|-------------|---|--|
| Platform | R/V Kilo Moana | |
| Report | http://globec.whoi.edu/nep/reports/cgoa_cruises/km0313cr.pdf | |
| Start Date | 2003-09-13 | |
| End Date | 2003-09-28 | |
| Description | Cruise information and original data are available from the NSF R2R data catalog. | |

MF0303

| Website | https://www.bco-dmo.org/deployment/57970 | |
|------------|---|--|
| Platform | R/V Miller Freeman | |
| Report | http://globec.whoi.edu/nep/reports/psullivan/mf0303_rpt.pdf | |
| Start Date | 2003-02-24 | |
| End Date | 2003-03-07 | |

HX287

| Website | https://www.bco-dmo.org/deployment/57549 | |
|-------------|--|--|
| Platform | R/V Alpha Helix | |
| Report | http://globec.whoi.edu/nep/reports/cgoa_cruises/hx287cr.pdf | |
| Start Date | 2004-07-08 | |
| End Date | 2004-07-19 | |
| Description | Original cruise data are available from the NSF R2R data catalog Methods & Sampling | |
| Description | Update: Corrected location id#165757 from lat=51.2307 to 57.2307. It was way out of line from the others. 20100524, njc: | |

HX284

| Website | https://www.bco-dmo.org/deployment/57971 | |
|-------------|--|--|
| Platform | R/V Alpha Helix | |
| Report | http://globec.whoi.edu/nep/reports/cgoa_cruises/hx284cr.pdf | |
| Start Date | 2004-05-15 | |
| End Date | 2004-05-26 | |
| Description | n Original cruise data are available from the NSF R2R data catalog | |

RB0103b

| Website | https://www.bco-dmo.org/deployment/57575 | |
|-------------|--|--|
| Platform | NOAA Ship Ronald H. Brown | |
| Report | http://globec.whoi.edu/nep/reports/cgoa_cruises/rb0103cr.pdf | |
| Start Date | 2001-05-13 | |
| End Date | 2001-05-23 | |
| Description | FOCI Cruise RB0103 Leg 2 Seward, AK to Kodiak, AK This cruise was divided into three legs: RB0103a - Leg 1 FOCI deployment report - 06 May 2001 to 13 May 2001 RB0103b - Leg 2 FOCI deployment report - 13 May 2001 to 23 May 2001 RB0103L3 - Leg 3 FOCI deployment report - 25 May 2001 to 08 June 2001 | |

Project Information

U.S. GLOBEC Northeast Pacific (NEP)

Website: http://nepglobec.bco-dmo.org

Coverage: Northeast Pacific Ocean, Gulf of Alaska

Program in a Nutshell

Goal: To understand the effects of climate variability and climate change on the distribution, abundance and production of marine animals (including commercially important living marine resources) in the eastern North Pacific. To embody this understanding in diagnostic and prognostic ecosystem models, capable of capturing the ecosystem response to major climatic fluctuations.

Approach: To study the effects of past and present climate variability on the population ecology and population dynamics of marine biota and living marine resources, and to use this information as a proxy for how the ecosystems of the eastern North Pacific may respond to future global climate change. The strong temporal variability in the physical and biological signals of the NEP will be used to examine the biophysical mechanisms through which zooplankton and salmon populations respond to physical forcing and biological interactions in the coastal regions of the two gyres. Annual and interannual variability will be studied directly through **long-term observations** and detailed **process studies**; variability at longer time scales will be examined through **retrospective analysis** of directly measured and proxy data. Coupled **biophysical models** of the ecosystems of these regions will be developed and tested using the process studies and data collected from the long-term observation programs, then further tested and improved by hindcasting selected retrospective data series.

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Program Information

U.S. GLOBal ocean ECosystems dynamics (U.S. GLOBEC)

Website: http://www.usglobec.org/

Coverage: Global

U.S. GLOBEC (GLOBal ocean ECosystems dynamics) is a research program organized by oceanographers and fisheries scientists to address the question of how global climate change may affect the abundance and

production of animals in the sea.

The U.S. GLOBEC Program currently had major research efforts underway in the Georges Bank / Northwest Atlantic Region, and the Northeast Pacific (with components in the California Current and in the Coastal Gulf of Alaska). U.S. GLOBEC was a major contributor to International GLOBEC efforts in the Southern Ocean and Western Antarctic Peninsula (WAP).

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Funding

| Funding Source | Award |
|--|------------------|
| National Oceanic and Atmospheric Administration (NOAA) | unknown NEP NOAA |
| National Science Foundation (NSF) | unknown NEP NSF |

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