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National Contact: **Steve Piotrowicz**
Steve.Piotrowicz@noaa.gov

Summary of operational and planned GOOS participation

Observations	**Comments**
Surface Drifter	1406 active and on the GTS April 2010 Hurricane Array Deployments ftp://ftp.aoml.noaa.gov/pub/phod/pazos/data/hur/dep_hur07.html
Waves	All NDBC moored buoys report significant wave height. http://www.ndbc.noaa.gov/ see moorings below. Gulf of Maine Ocean Observing System (10 sites reporting waves, SST, and some sub-surface temp, salinity and currents. http://www.gomoos.org/
Moorings	NOAA/NDBC: 105 coastal and off-shore moored buoys, 78 of which are operational April 2010. To see present status go to: http://www.ndbc.noaa.gov/wstat.shtml http://www.ndbc.noaa.gov/rmd.shtml NDBC Partners: http://www.ndbc.noaa.gov/pstat_ocean.shtml TAO, PIRATA (plus NTAS mooring) http://www.pmel.noaa.gov/tao/ http://www.pmel.noaa.gov/pirata/pir_implement.html RAMA- Indian Ocean USA/India: 3 surface moorings, 2 flux reference sites and 1 ADCP moorings deployed near the equator at 80E. USA/Indonesia: 4 surface moorings along 90E. USA/France: Flux reference site 66E, 8S. Full IO array and plans can be seen at: http://www.pmel.noaa.gov/tao/disdel/disdel.html Fixed off shore drilling units and others: http://www.ndbc.noaa.gov/to_station.shtml Data from 234 moorings reported by (JCOMMOPS) June 2010. Tsunami – Network of 49 (39 maintained by the USA) Deep-ocean Assessment and Reporting of Tsunamis (DART) buoys in place early July 2010. 7 buoys have been deployed in the Western

	Atlantic, 4 in the Indian Ocean (Indonesia, Thailand and Australia), 5 others by Australia (2 of which are in the Southern Ocean) and Chile maintains 1 off it's coast. http://www.ndbc.noaa.gov/dart.shtml
XBTs	XBT SOOP Lines supported by USA: Atlantic – AX- 04, 07, 08, 10, 18, 22 & 32 Pacific – PX-06, 08, 09, 10, 13, 31, 37, 37S, 38, 44, 50 and 81. Indian –IX-15/31, 21 and 6. AOML HDX Program http://www.aoml.noaa.gov/phod/hdenxbt/high_density_home.html SIO HDX Program http://www-hrx.ucsd.edu/index.html
ARGO	1786 active June 2010. 231 deployments planned in 2010 as of June 225. Argo Global Data Center www.usgodae.org/argo/argo.html
Sea Level	27 GLOSS MSL as of 10/2009, all reporting well (ie 2007 or later data posted at Bidston) except Miami, Johnston Is and French Frigate Shoals. 38 FAST stations reporting well. FAST data posted at Hawaii through May 2010. http://ilikai.soest.hawaii.edu/uhslc/datai.html NOAA/NOS Water Level Observation Network. 262 stations of this network are relevant to GOOS. These stations are located in 20 coastal States of the lower 48, Alaska and coasts of Hawaii. 24 sites are located on non US Islands http://tidesandcurrents.noaa.gov http://tidesandcurrents.noaa.gov/station_retrieve.shtml?type=Tide%20Data&state=All%20Stations&id1= 54 GPS positioned stations, 22 of which are GLOSS MSL and/or FAST http://www.sonel.org/phpgen/projects/survey.cgps.php3
TS Hydrography	Latest and next US Repeat Hydrographic sections (standard WOCE sampling): A10, 2011 A16N-Iceland to 5S, 2003 and 2013. A16S-5S to 60S, 2005 and 2014. A20-52W, 2003 and 2012. A22-66W, 2003 and 2012. A13.5-Equator, Cape Town to Ghana, 1983 and 2010. P2-30N, 2004 and 2013. P6, 2009

P16N/S-112-102W, 2005/6 and 2014.
S4P-Nominal 67S, connects with S41 and SR4, 1992 Russia and 2011 USA.
I2+I10 from 8S+111E, 1995 USA, 2011-2012 Japan.
I41 1996 USA and 2012-13 Japan
Davis Straits, 2009 and 2010 USA/Canada.
RUSALCA, Bering and Chukchi Seas, USA 2009 and 2010
http://ushydro.ucsd.edu/repeathydro_map.html
http://www.go-ship.org/RefSecs/Table&Meas_May2010b.pdf

OceanSITES –See
http://www.oceansites.org/network/index.html

BATS - Hydrostation S www.bios.edu
HOTS http://hahana.soest.hawaii.edu/hot/hot_jgofs.html
Calcofi http://calcofi.net/cruises/sms-cruisestatus.html

Biological

NOAA operates 2 Continuous Plankton Recorders(CPR) between Boston/Nova Scotia and New York/Bermuda.
Pacific CPR program
http://192.171.163.165/pacific_project_data.htm

Carbon

PMEL - Moored pCO_2 network: 5 low latitude mid Pacific (TAO), Hawaii (HOT), Station PAPA, Kurosiro Extension (with Japan), and Stratus (20S).

Underway pCO_2 measurements along 8 TAO lines during routine redeployment/ recovery cruises. Coastal component with NDBC at sites in Oahu, Seattle, Georgia and New Hampshire.
http://www.pmel.noaa.gov/co2/uwpco2/eq_pacific.html
http://www.jamstec.go.jp/iorgc/ocorp/ktsfg/data/jkeo/

AOML – Research Ship and VOS underway CO_2 Program.
Ships: Ron Brown, Polar Star, Explorer, Palmer, Skogafoss' Baldridge and Xuelong.
http://www.aoml.noaa.gov/ocd/gcc/index.php

Sea also: Carbon Underway Measurements-Global
http://ioc3.unesco.org/ioccp/Underway/TablePDFs/UWGlobalNov07.pdf

PMEL CO2 moorings http://www.pmel.noaa.gov/co2/moorings/btm/btm_main.htm
PMEL Underway PCO2 http://www.pmel.noaa.gov/co2/uwpco2/
PMEL Coastal CO2 Moorings http://www.pmel.noaa.gov/co2/coastal/
Lamont-Doherty http://www.ldeo.columbia.edu/res/pi/CO2/

Sea Ice	National Ice Center: a multi-agency operational center www.natice.noaa.gov http://nsidc.org/data/
VOS	2076 ships operating 6/28/2010, 870 on GTS, potential 2889 VOSClim target is 50 ships, 17 presently active http://wo.jcommops.org/cgi-bin/WebObjects/JCOMMOPS.woa/2/wo/MyLY0ASxMoBkOynG4oqbFM/2.0.104 and go to PLATFORMS and VOS US
Coastal	NOAA/NDBC C-MAN stations (49 sites overall January 2010). Report sea level pressure, wind, air temp, SST (13 sites) and tides (3 sites) http://www.ndbc.noaa.gov/wstat.shtml Several local networks exist, for example: Caro-COOPS, Carolinas Coastal Ocean Observing and Prediction System, University of South Florida network in the Gulf of Mexico, and the Texas Coastal Ocean Observing Network. See the complete list and further information at: www.ndbc.noaa.gov/to_station.shtml Coral Reef – Install meteorological and oceanographic monitoring stations at all major US coral reef areas by 2010 http://coralreefwatch.noaa.gov SeagrassNet – www.seagrassNet.org ANTARES Participant – study of the long-term changes in the marine echosystems around Latin America.

For further information on the US component of GOOS visit – The National Office for Integrated and Sustained Ocean Observations http://www.ocean.us/ioos_system

http://tidesandcurrents.noaa.gov/